

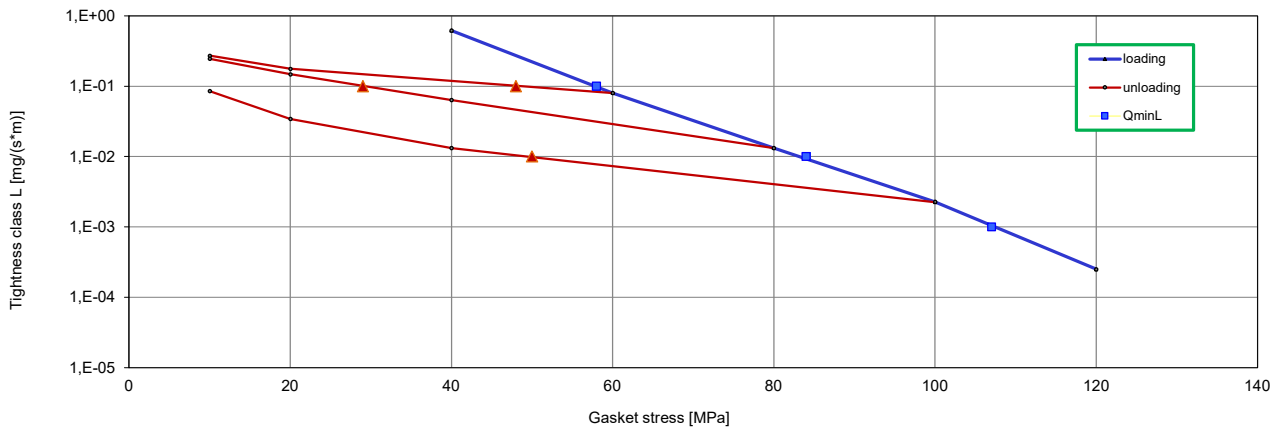
Company	<b>SPETECH sp. z o.o.</b>
Gasket Type	<b>DRYFLEX® TUI 810</b>
Dimensions [mm]	<b>70 x 54 x 3,6</b>
Calculation type EN 1591-1	<b>a) flat gasket; EN 1514-6</b>

**Factors acc. to EN 13555 to use in calculation standard EN 1591-1:2009/ :2013**

 Minimum level of surface pressure required for leakage rate class L on assembly  $Q_{min/L}$  and after off-loading  $Q_{Smin/L}$  at room temperature (RT)

Internal pressure [bar]	10											
	$Q_{min/L}$ [MPa]	$Q_{Smin/L}$ [MPa] for effective gasket stress										
L [mg/(s*m)]		$Q_A = 10$ [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]	$Q_A = 180$ [MPa]	$Q_A = 200$ [MPa]
$10^{-0}$	40				40	40	40					
$10^{-1}$	58				48	29	40					
$10^{-2}$	84						50					
$10^{-3}$	107											
$10^{-4}$												
$10^{-5}$												

Leakage rate as a function of gasket stress - pressure 10 bar / RT

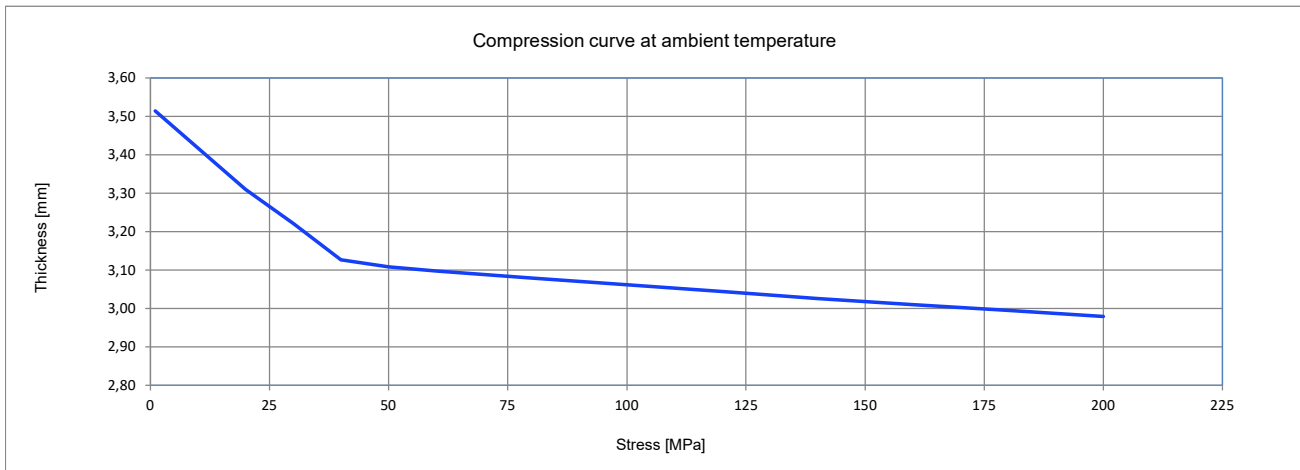

**Parameters at RT**

Gasket stress [MPa]	Unloading modulus of elasticity	Gasket or sealing element thickness	Creep relaxation factor	Gasket thickness change due to creep	Maximum surface pressure	Static friction factor
	<b>EG</b>					
	[MPa]	[mm]	[-]	[mm]	[MPa]	[-]
1		3,514			200	0,25
20	1226	3,310				
30	1994	3,221	0,96	0,004		
40	2205	3,126				
50	2611	3,109				
60	2922	3,098				
80	3438	3,079				
100	3338	3,062	0,98	0,006		
120	4025	3,044				
140	5107	3,026				
160	6410	3,011				
180	5724	2,995				
200	6227	2,979	1,00	0,002		

**Parameters at 200°C**

Gasket stress [MPa]	Unloading modulus of elasticity	Gasket or sealing element thickness	Creep relaxation factor	Gasket thickness change due to creep	Maximum surface pressure	Static friction factor
	<b>EG</b>					
	[MPa]	[mm]	[-]	[mm]	[MPa]	[-]
1		3,554			200	0,25
20	1230	3,068				
30	1784	3,054	0,41	0,055		
40	1981	3,043				
50	2521	3,033				
60	2806	3,024				
80	3901	3,005				
100	3886	2,985	0,96	0,012		
120	4430	2,968				
140	4860	2,953				
160	5359	2,938				
180	6259	2,922				
200	6930	2,905	0,98	0,012		

Parameters at 400°C						
Gasket stress [MPa]	Unloading modulus of elasticity EG [MPa]	Gasket or sealing element thickness e <sub>G</sub> [mm]	Creep relaxation factor P <sub>QR</sub> [-]	Gasket thickness change due to creep Δe <sub>Gc</sub> [mm]	Maximum surface pressure Q <sub>smax</sub> [MPa]	Static friction factor μ <sub>G</sub> [-]
1		3,594			200	0,25
20	1264	3,105				
30	2040	3,100	0,85	0,014		
40	2587	3,096				
50	2620	3,087				
60	2859	3,076				
80	3191	3,049				
100	3932	3,022	0,92	0,025		
120	4388	2,997				
140	4781	2,974				
160	5217	2,952				
180	5487	2,931				
200	5856	2,910	0,97	0,019		



**Factors acc. to EN 13555 to use in calculation standard EN 1591-1:2001**

T [°C]	Q <sub>min</sub> [MPa]	Q <sub>max, ref</sub> [MPa]	E <sub>0</sub> [MPa]	K <sub>1</sub>	Q <sub>i</sub> /P	g <sub>c</sub>	c <sub>1</sub>
0...20	NDA	NDA	NDA	NDA	NDA	NDA	NDA
100	NDA	NDA	NDA	NDA	NDA	NDA	NDA
200	NDA	NDA	NDA	NDA	NDA	NDA	NDA
300	NDA	NDA	NDA	NDA	NDA	NDA	NDA
bGref [mm]		8,0		eGref [mm]		3,6	

**Factors acc. to:**

EN 13445-3 : Unfired pressure vessels - Part 3: Design  
 EN 13480-3:2002 Metallic industrial piping - Part 3: Design and calculation  
 ASME Code s. VIII Boiler & Pressure Vessel Code

m	y [psi]	y [MPa]
NDA	NDA	NDA

[σ<sub>max</sub> - see maximal applicable gasket stress Q<sub>smax</sub> acc. EN 1591-1:2009/2013](#)

**Factors acc. to:**

AD 2000-Merkblatt B7 August 2007

k <sub>0</sub> k <sub>0</sub> [N/mm]	k <sub>1</sub> [mm]	k <sub>0</sub> k <sub>0</sub> [N/mm]
NDA	NDA	NDA

[σ<sub>max</sub> - see maximal applicable gasket stress Q<sub>smax</sub> acc. EN 1591-1:2009/2013](#)

**Factors acc. to:**

WUDT-UC-WO-0/19

σ <sub>m</sub> [MPa]	σ <sub>r</sub> [MPa]	b [1]		
		20oC	100oC	200oC
NDA	NDA	NDA	NDA	NDA

[σ<sub>max</sub> - see maximal applicable gasket stress Q<sub>smax</sub> acc. EN 1591-1:2009/2013](#)

**Factors acc. to:**

ASTM F36-2003 Standard Test Method for Compressibility and Recovery of Gasket Materials  
Procedure J

Compressibility [%]	Recovery [%]
NDA	NDA

**Factors acc. to:**

ASTM F38-00 Standard Test Methods for Creep Relaxation of a Gasket Material (Method B)

Temperature [°C]	Creep Relaxation [%]
20	NDA
100	NDA
200	NDA

**Factors acc. to:**

EN 61340-2-3 Electrostatics - Part 2-3: Methods of test for determining the resistance and resistivity of solid planar materials used to avoid electrostatic charge accumulation

Surface resistance $R_s$ at U=100V	[ $\Omega$ ]	5,34E+11
Volume resistance $R_v$ at U=100V	[ $\Omega$ ]	4,78E+11
Surface resistivity $\rho_s$ at U=100V	[ $\Omega$ ]	5,41E+12
Volume resistivity $\rho_v$ at U=100V	[ $\Omega m$ ]	1,97E+11