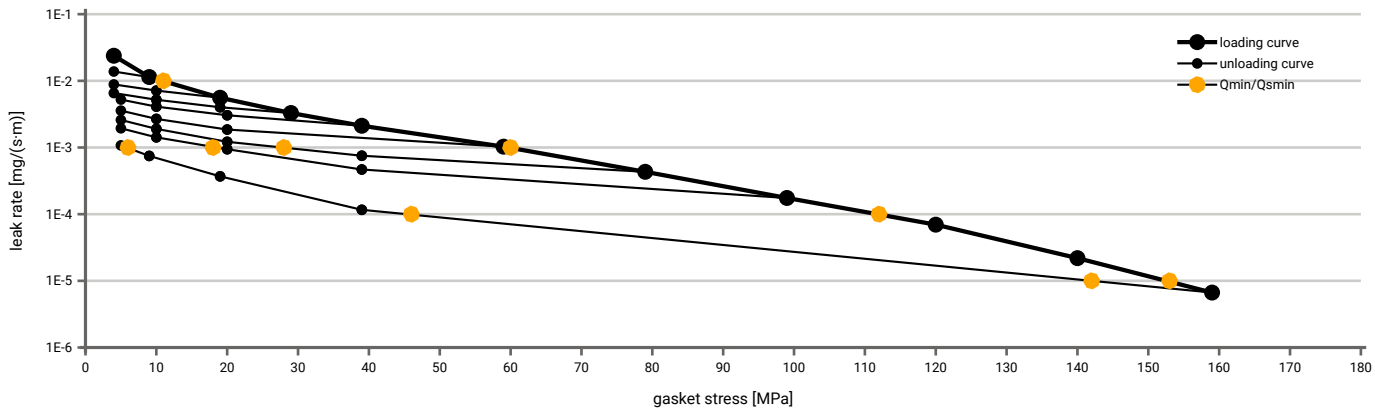
Manufacturer address	SGL Carbon GmbH, Werner-von-Siemens-Straße 16, 86405 Meitingen, DE	According to **DIN EN 13555 2005-2**
Product name	Sigraflex Economy V15010C4	
Product dimensions	92 x 49 x 1.5 mm (DIN EN 1514-1 1997-8)	

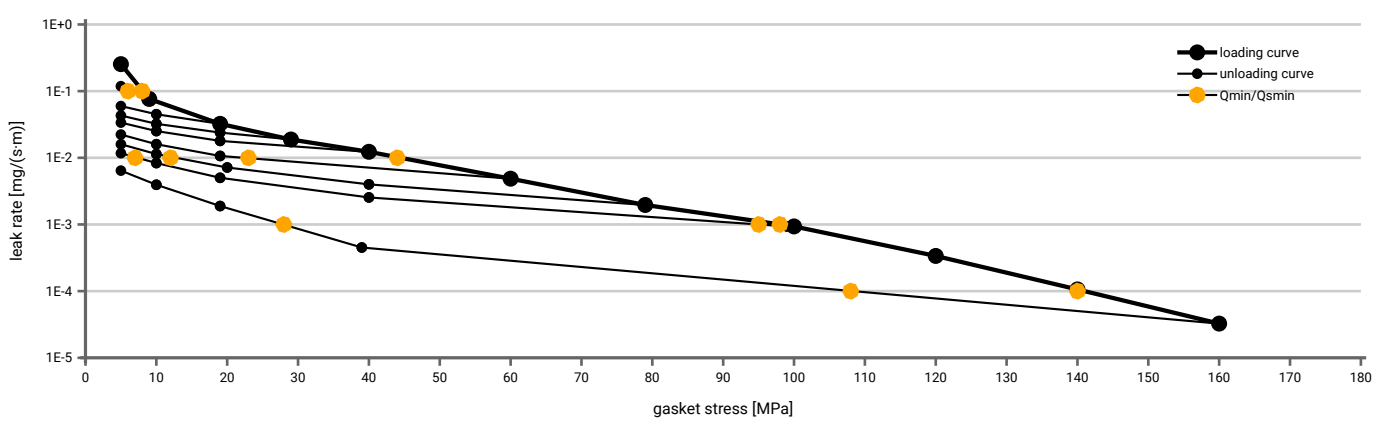
Minimum stress to seal $Q_{min(L)}$ (at assembly), $Q_{smin(L)}$ (after off-loading) for p = 10 bar (T = 23 ± 2 °C)

L [mg/(s·m)]	$Q_{min(L)}$ [MPa]	$Q_{smin(L)}$ [MPa]										
		Q_A = 5 [MPa]	Q_A = 10 [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 = 120 [MPa]	Q_A = 140 [MPa]	Q_A = 160 [MPa]
1E-0	5		5	5	5	5	5	5	5			5
1E-1	5		5	5	5	5	5	5	5			5
1E-2	12			5	5	5	5	5	5			5
1E-3	61							28	19			6
1E-4	112											46
1E-5	153											143
1E-6												
1E-7												
1E-8												



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 = 30 [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-0	5		5	5	5	5	5	5	5			5
1E-1	9		7	5	5	5	5	5	5			5
1E-2	44						23	13	7			5
1E-3	98								96			29
1E-4	141											109
1E-5												
1E-6												
1E-7												
1E-8												

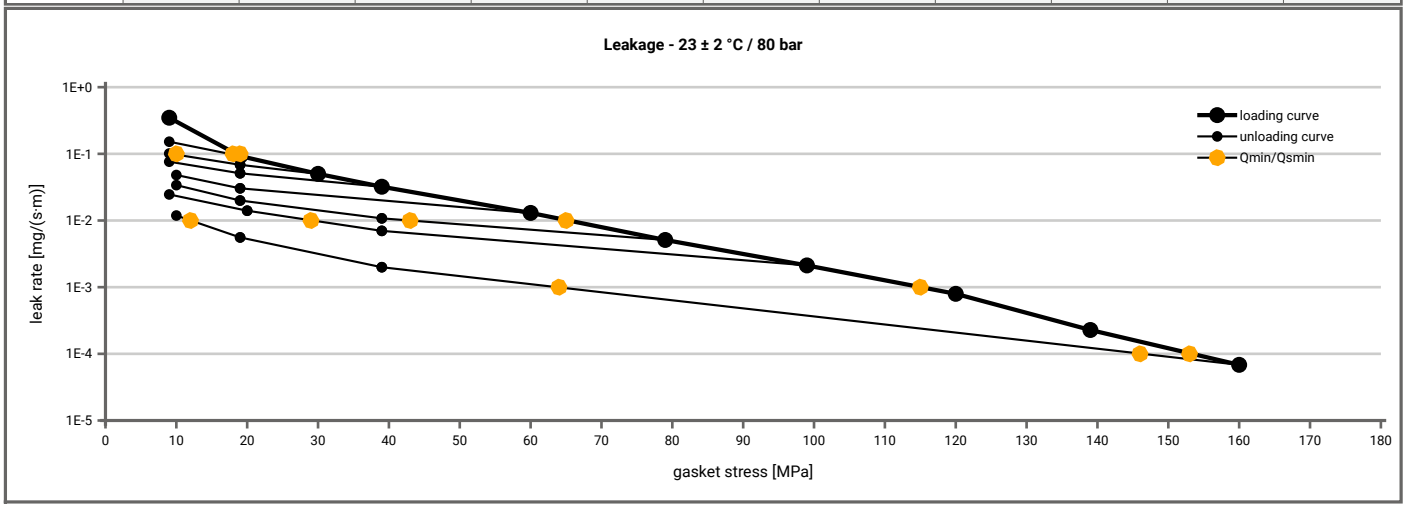


Note: the content of darkened cells was not determined respectively is unnecessary	Rev.-No.: **1**	Creation date of this sheet: **2012-12-20**

Manufacturer address	SGL Carbon GmbH, Werner-von-Siemens-Straße 16, 86405 Meitingen, DE	According to **DIN EN 13555 2005-2**
Product name	Sigraflex Economy V15010C4	
Product dimensions	92 x 49 x 1.5 mm (DIN EN 1514-1 1997-8)	

Minimum stress to seal $Q_{min(L)}$ (at assembly), $Q_{smin(L)}$ (after off-loading) for p = 80 bar (T = 23 ± 2 °C)

L [mg/(s·m)]	$Q_{min(L)}$ [MPa]	$Q_{smin(L)}$ [MPa]									
		Q_A = 10 [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 = 120 [MPa]	Q_A = 140 [MPa]	Q_A = 160 [MPa]
1E-0	10		10	10	10	10	10	10			10
1E-1	19		18	10	10	10	10	10			10
1E-2	66						44	30			12
1E-3	115										64
1E-4	154										146
1E-5											
1E-6											
1E-7											
1E-8											

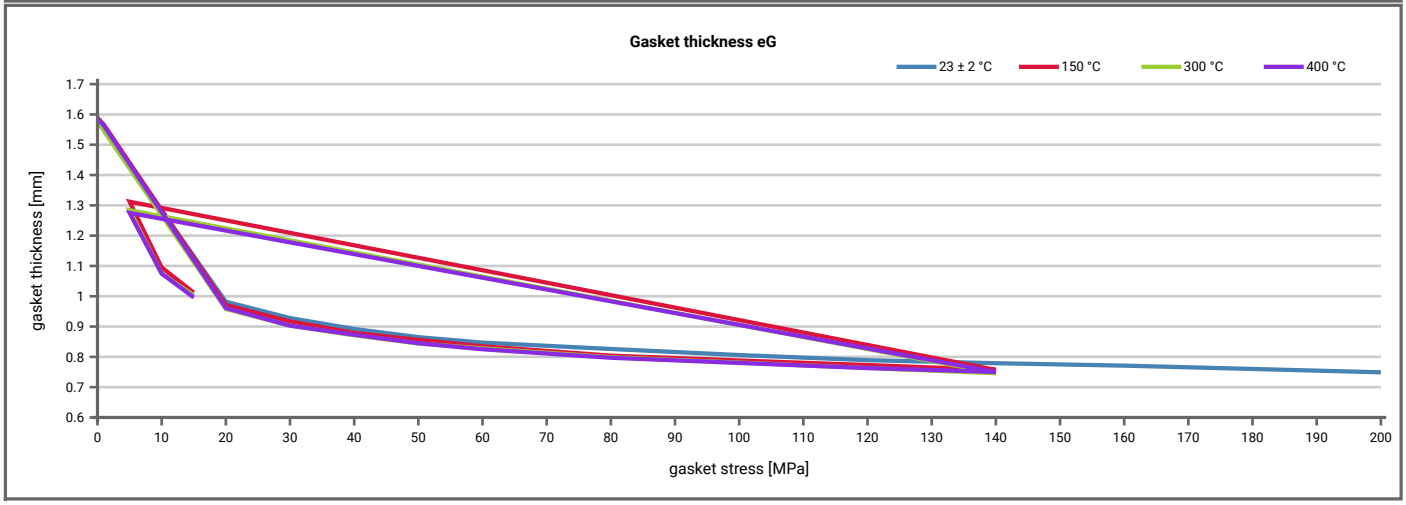


Note: the content of darkened cells was not determined respectively is unnecessary	Rev.-No.: **1**	Creation date of this sheet: **2012-12-20**

Manufacturer address	SGL Carbon GmbH, Werner-von-Siemens-Straße 16, 86405 Meitingen, DE	According to **DIN EN 13555 2005-2**
Product name	Sigraflex Economy V15010C4	
Product dimensions	92 x 49 x 1.5 mm (DIN EN 1514-1 1997-8)	

Relaxation ratio P_{QR} for stiffness C = 500 [kN/mm]										
Gasket stress	**23 ± 2 °C**		**Temperature 1 [150 °C]**		**Temperature 2 [300 °C]**		**Temperature 3 [400 °C]**			
	P_{QR}	**Δe_{Gc} [µm]**	**P_{QR}**	**Δe_{Gc} [µm]**	**P_{QR}**	**Δe_{Gc} [µm]**	**P_{QR}**	**Δe_{Gc} [µm]**	**P_{QR}**	**Δe_{Gc} [µm]**
Stress level 1 [30 MPa]	0.99	3	0.95	13	0.94	15	0.93	18		
Stress level 2 [50 MPa]	1.00	0	0.97	13	0.97	15	0.97	15		
P_{QR} and Δe_{Gc} at maximum gasket stress to be applied Q_{smax}										
P_{QR} at Q_{smax}	1.00	0	0.99	12	0.98	23	0.98	23		
Q_{smax}	200 MPa		140 MPa		140 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 [300 °C]**		**Temperature 3 [400 °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	1.570	0	1.589	0	1.579	0	1.587		
1	0	1.553	0	1.566	0	1.545	0	1.563		
20 / 5 / 5 / 5	378	0.982	84	1.312	87	1.284	99	1.275		
30 / 10 / 10 / 10	647	0.928	210	1.095	201	1.074	210	1.075		
40 / 15 / 15 / 15	798	0.892	277	1.012	341	1.003	293	0.996		
50 / 20 / 20 / 20	1053	0.865	466	0.971	464	0.958	568	0.961		
60 / 30 / 30 / 30	1429	0.847	745	0.917	699	0.903	687	0.903		
80 / 40 / 40 / 40	3005	0.826	870	0.879	1091	0.871	1061	0.873		
100 / 50 / 50 / 50	3168	0.806	1344	0.856	1204	0.844	1146	0.845		
120 / 60 / 60 / 60	2927	0.789	1565	0.835	1680	0.828	1517	0.825		
140 / 80 / 80 / 80	4661	0.779	2170	0.804	2665	0.799	2842	0.797		
160 / 100 / 100 / 100	6139	0.771	4350	0.788	3126	0.781	3752	0.780		
180 / 120 / 120 / 120	6979	0.760	6620	0.773	4309	0.763	3956	0.763		
200 / 140 / 140 / 140	5462	0.749	4681	0.757	3999	0.746	4146	0.750		



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