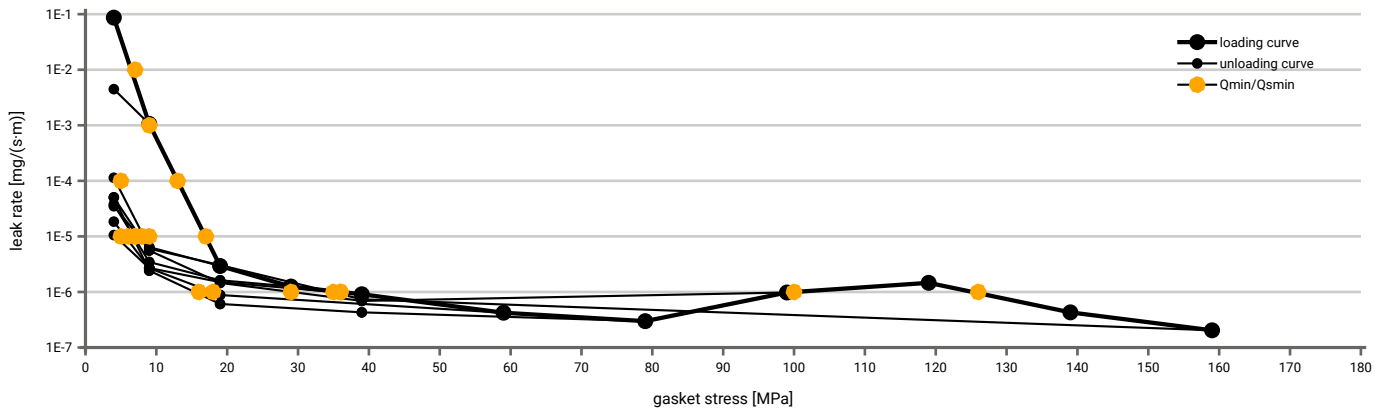
Manufacturer address	SGL Carbon GmbH, Werner-von-Siemens-Straße 16, 86405 Meitingen, DE	According to DIN EN 13555 2014-7
Product name	Sigraflex MF V20011Z2MF IB	
Product dimensions	92 x 49 x 2 mm (DIN EN 1514-1 1997-8)	

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 = 4.7 [MPa]	Q_A = 9.7 [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	7		5	5	5	5	5	5	5			5
1E-3	10			5	5	5	5	5	5			5
1E-4	14			5	5	5	5	5	5			5
1E-5	18			9	8	6	5	8	8			8
1E-6	37					36	19	16	30			35
1E-7												
1E-8												

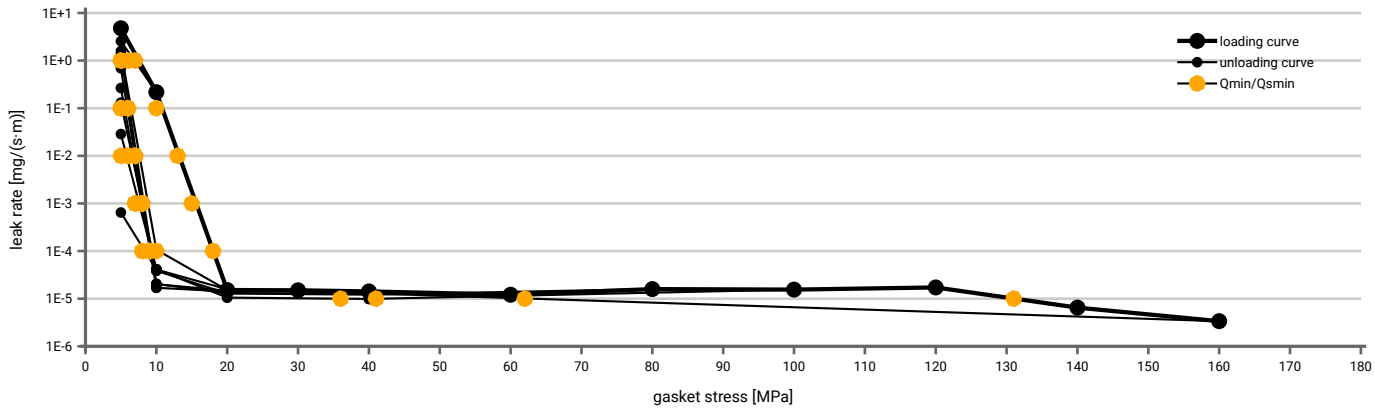
Leakage - 23 ± 2 °C / 10 bar



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 = 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+1	5		5	5	5	5	5	5	5			5
1E-0	8		7	5	5	5	5	5	5			5
1E-1	11			6	6	6	6	5	5			5
1E-2	13			8	7	7	7	7	6			5
1E-3	16			9	8	8	8	8	8			5
1E-4	18			10	9	9	9	9	9			8
1E-5	131								42			63
1E-6												
1E-7												
1E-8												

Leakage - 23 ± 2 °C / 40 bar



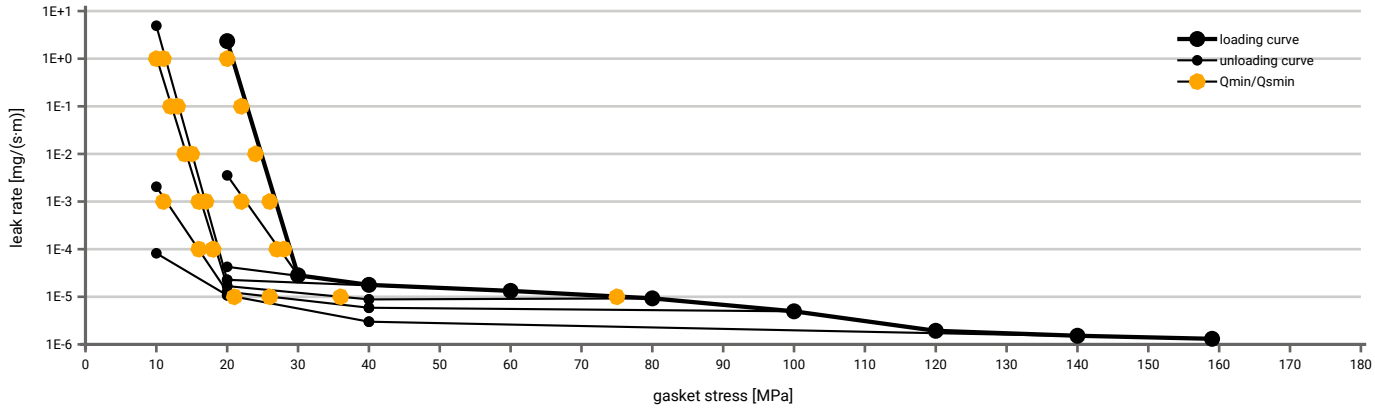
Note: the content of darkened cells was not determined respectively is unnecessary	Rev.-No.: **4**	Creation date of this sheet: **2016-07-18**

Manufacturer address	SGL Carbon GmbH, Werner-von-Siemens-Straße 16, 86405 Meitingen, DE	According to **DIN EN 13555 2014-7**
Product name	Sigraflex MF V20011Z2MF IB	
Product dimensions	92 x 49 x 2 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 = 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+1	20		20	20	10	10	10			10
1E-0	21		20	20	11	10	10			10
1E-1	23		20	20	13	12	10			10
1E-2	25		20	20	15	14	10			10
1E-3	27		23	20	17	16	12			10
1E-4	29		27	20	19	19	16			10
1E-5	76					36	26			21
1E-6										
1E-7										
1E-8										

Leakage - 23 ± 2 °C / 80 bar

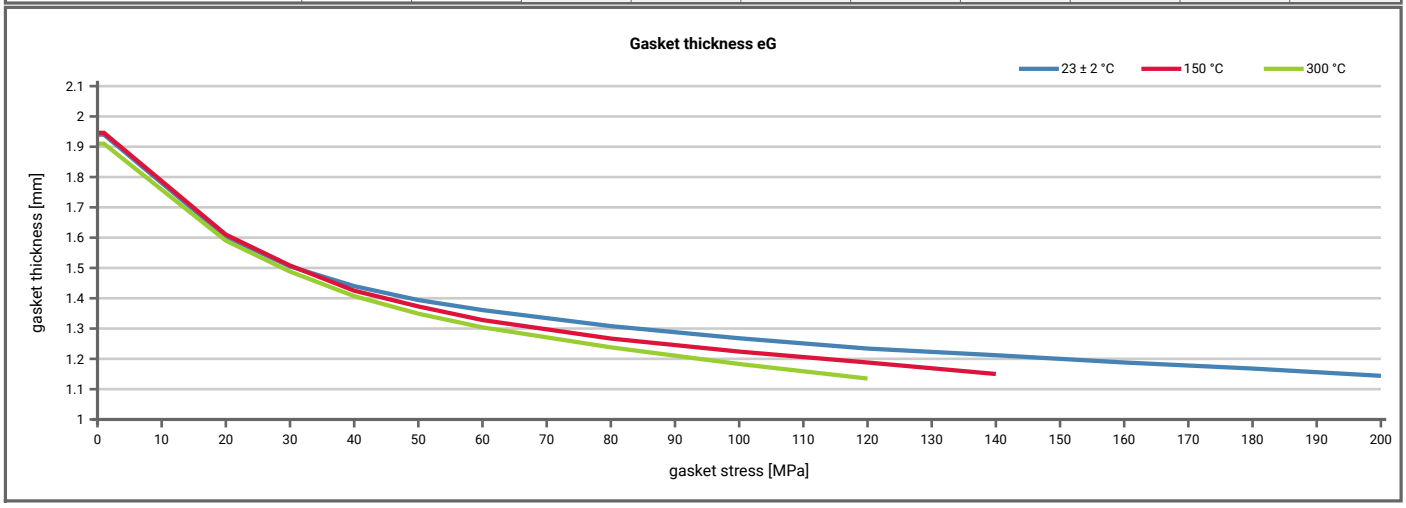


Note: the content of darkened cells was not determined respectively is unnecessary	Rev.-No.: **4**	Creation date of this sheet: **2016-07-18**

Manufacturer address	SGL Carbon GmbH, Werner-von-Siemens-Straße 16, 86405 Meitingen, DE	According to **DIN EN 13555 2014-7**
Product name	Sigraflex MF V20011Z2MF IB	
Product dimensions	92 x 49 x 2 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]**					
	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]	0.98	6	0.93	18	0.87	34				
Stress level 2 [50 MPa]	0.98	8	0.94	27	0.86	61				
P_{QR} and Δe_{Gc} at maximum gasket stress to be applied Q_{smax}										
P_{QR} at Q_{smax}	0.99	17	0.95	59	0.91	96				
Q_{smax}	200 MPa		140 MPa		120 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]**					
	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	1.940	0	1.946	0	1.910				
1	0	1.940	0	1.946	0	1.910				
20	507	1.603	614	1.610	624	1.590				
30	704	1.505	780	1.508	680	1.488				
40	995	1.440	964	1.425	961	1.407				
50	1186	1.394	1344	1.373	1300	1.349				
60	1535	1.361	1470	1.328	1640	1.304				
80	2155	1.308	1971	1.267	2009	1.238				
100	2291	1.268	2467	1.224	2375	1.183				
120	2450	1.234	2728	1.188	2607	1.135				
140	3106	1.212	3079	1.150						
160	3054	1.188								
180	3266	1.168								
200	3358	1.144								



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