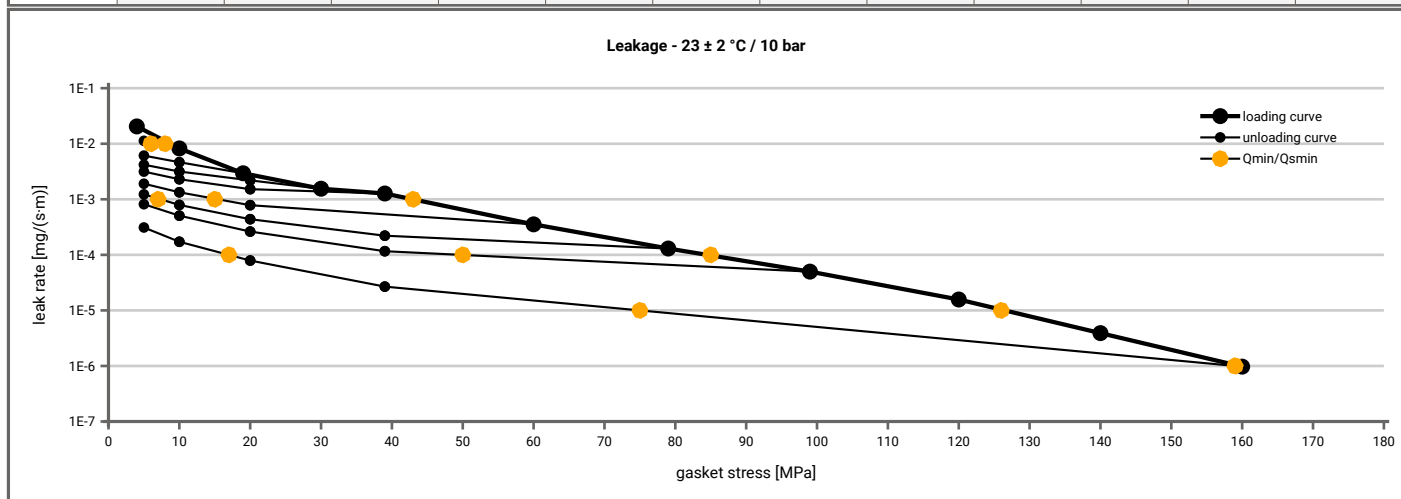
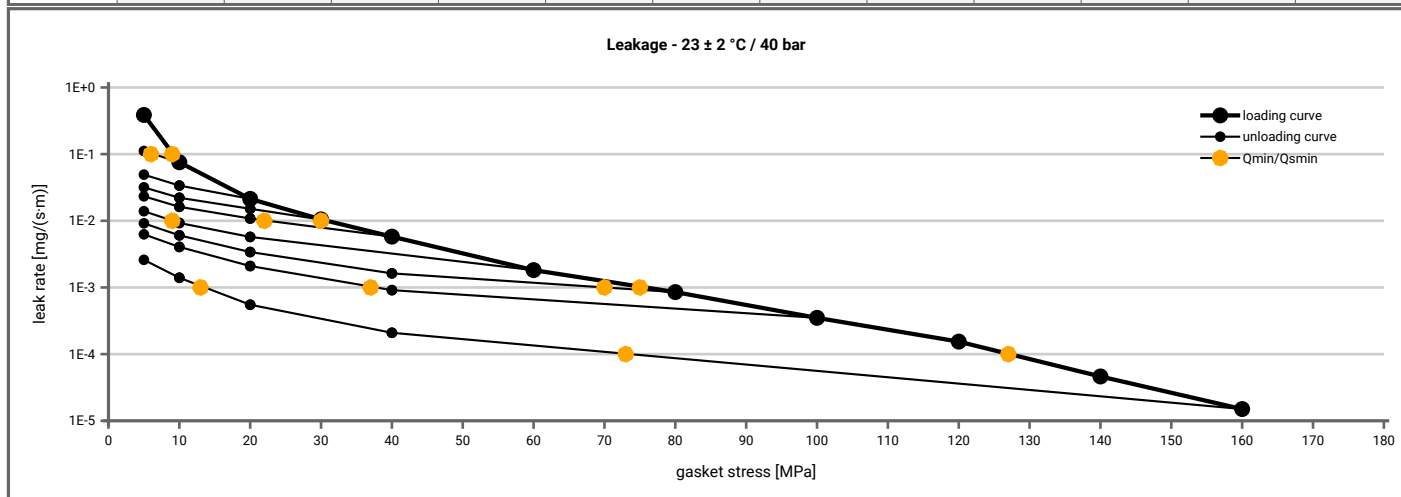


Manufacturer address	SGL Carbon GmbH, Werner-von-Siemens-Straße 16, 86405 Meitingen, DE	According to DIN EN 13555 2005-2
Product name	Sigraflex Hochdruck V30011Z3I	
Product dimensions	92 x 49 x 3 mm (DIN EN 1514-1 1997-8)	

Minimum stress to seal $Q_{min(L)}$ (at assembly), $Q_{smin(L)}$ (after off-loading) for $p = 10$ bar ($T = 23 \pm 2$ °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	9		7	5	5	5	5	5	5			5
1E-3	44						15	7	5			5
1E-4	85								51			17
1E-5	126											76
1E-6	160											159
1E-7												
1E-8												



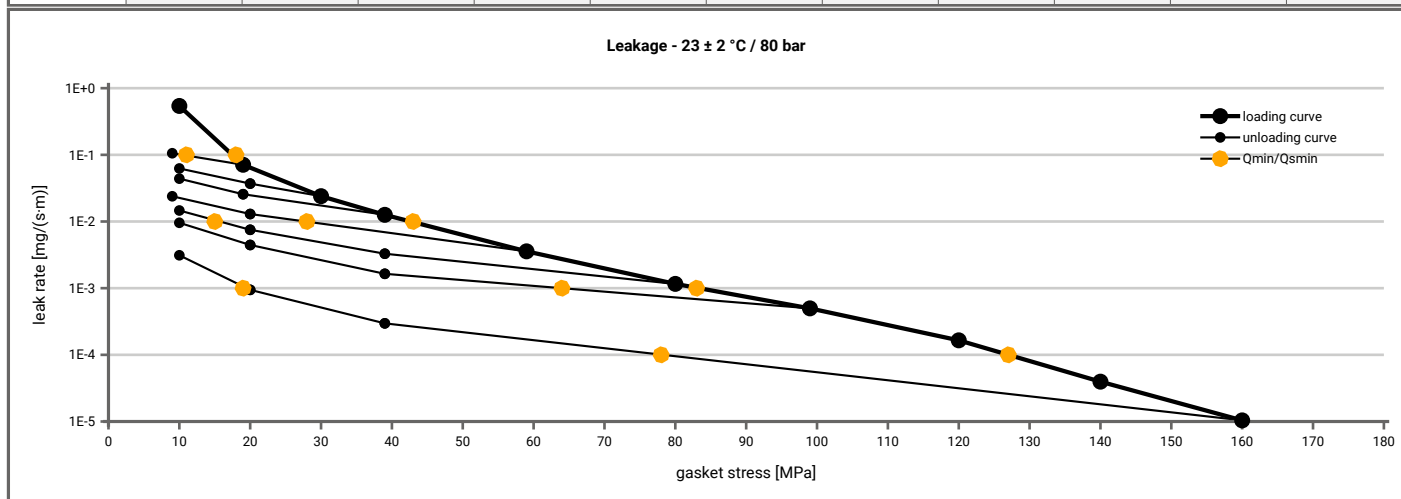
Minimum stress to seal $Q_{min(L)}$ (at assembly), $Q_{smin(L)}$ (after off-loading) for $p = 40$ bar ($T = 23 \pm 2$ °C)												
L [mg/(s·m)]	$Q_{min(L)}$ [MPa]	$Q_{smin(L)}$ [MPa]										
		$Q_A = 5$ [MPa]	$Q_A = 10$ [MPa]	$Q_A = 20$ [MPa]	$Q_A = 30$ [MPa]	$Q_A = 40$ [MPa]	$Q_A = 60$ [MPa]	$Q_A = 80$ [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		6	5	5	5	5	5	5			5
1E-2	31					23	9	5	5			5
1E-3	76							70	38			14
1E-4	127											74
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: 2011-10-18
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Manufacturer address	SGL Carbon GmbH, Werner-von-Siemens-Straße 16, 86405 Meitingen, DE	According to DIN EN 13555 2005-2
Product name	Sigraflex Hochdruck V30011Z3I	
Product dimensions	92 x 49 x 3 mm (DIN EN 1514-1 1997-8)	

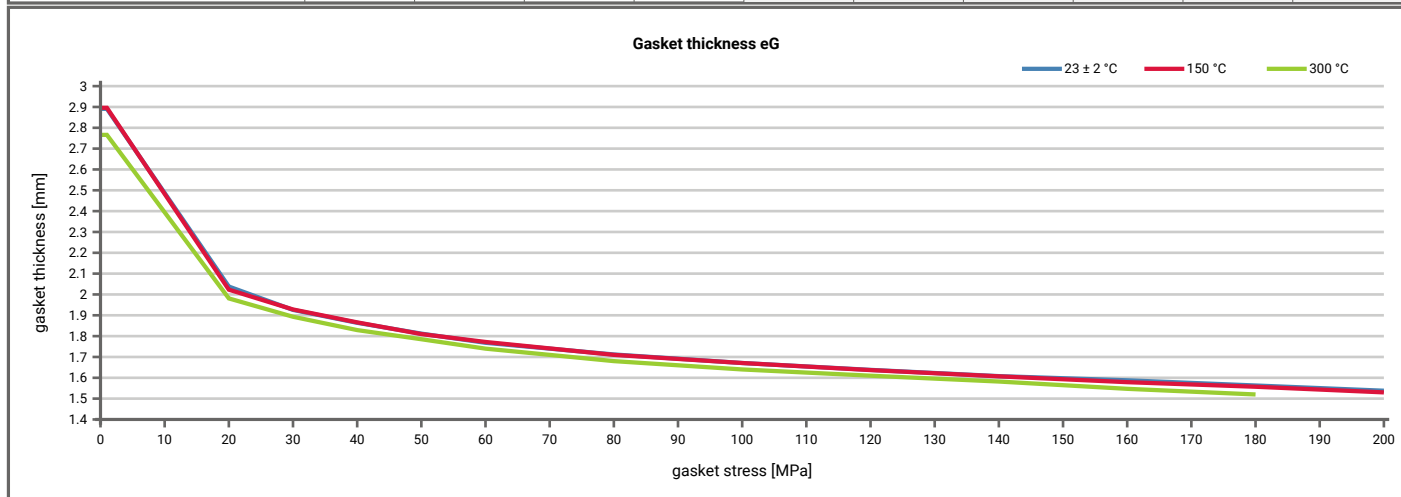
Minimum stress to seal $Q_{min(L)}$ (at assembly), $Q_{smin(L)}$ (after off-loading) for $p = 80$ bar ($T = 23 \pm 2$ °C)											
L [mg/(s·m)]	$Q_{min(L)}$ [MPa]	$Q_{smin(L)}$ [MPa]									
		$Q_A = 10$ [MPa]	$Q_A = 20$ [MPa]	$Q_A = 30$ [MPa]	$Q_A = 40$ [MPa]	$Q_A = 60$ [MPa]	$Q_A = 80$ [MPa]	$Q_A = 100$ [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	18		11	10	10	10	10	10			10
1E-2	44					28	16	10			10
1E-3	83							65			19
1E-4	127										79
1E-5											
1E-6											
1E-7											
1E-8											



Manufacturer address	SGL Carbon GmbH, Werner-von-Siemens-Straße 16, 86405 Meitingen, DE	According to DIN EN 13555 2005-2
Product name	Sigraflex Hochdruck V30011Z3I	
Product dimensions	92 x 49 x 3 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	0.92	21				
Stress level 2 [50 MPa]	0.98	8	0.96	19	0.95	21				
P_{QR} and Δe_{Gc} at maximum gasket stress to be applied Q_{smax}										
P_{QR} at Q_{smax}	1.00	0	0.99	17	0.98	30				
Q_{smax}	200 MPa		200 MPa		180 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	2.891	0	2.896	0	2.766				
1	0	2.891	0	2.896	0	2.766				
20	409	2.038	432	2.023	466	1.981				
30	631	1.926	660	1.928	670	1.893				
40	936	1.864	1003	1.866	995	1.829				
50	1089	1.812	1038	1.810	1423	1.785				
60	1275	1.768	1400	1.772	1323	1.740				
80	1949	1.712	1838	1.710	2025	1.680				
100	2578	1.671	2582	1.671	2427	1.640				
120	2840	1.638	2868	1.637	3163	1.610				
140	3146	1.608	3155	1.607	3322	1.582				
160	3960	1.588	3294	1.579	3190	1.547				
180	4279	1.563	3892	1.557	3245	1.520				
200	3695	1.538	4154	1.530						



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