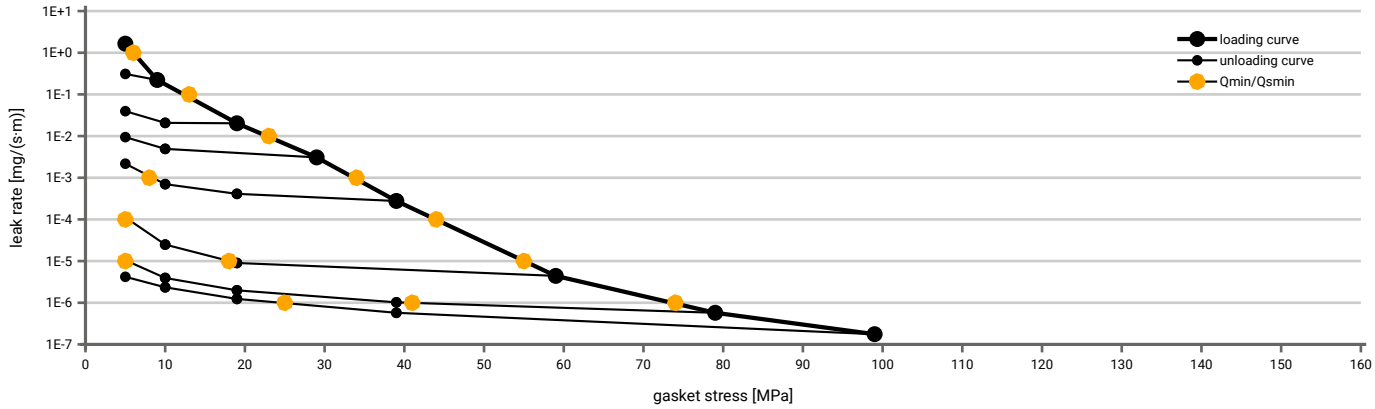
Manufacturer address	KLINGER GmbH, Richard Klinger Str. 37, 65510 Idstein, DE	According to
Product name	KLINGERSIL® C4400	**DIN EN 13555**
Product dimensions	92 x 49 x 3 mm (DIN EN 1514-1 1997-8)	**2014-7**

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]
1E+1	5		5	5	5	5	5	5	5
1E-0	6		5	5	5	5	5	5	5
1E-1	13			5	5	5	5	5	5
1E-2	24				5	5	5	5	5
1E-3	35					8	5	5	5
1E-4	45						5	5	5
1E-5	56						19	5	5
1E-6	74							41	25
1E-7									
1E-8									

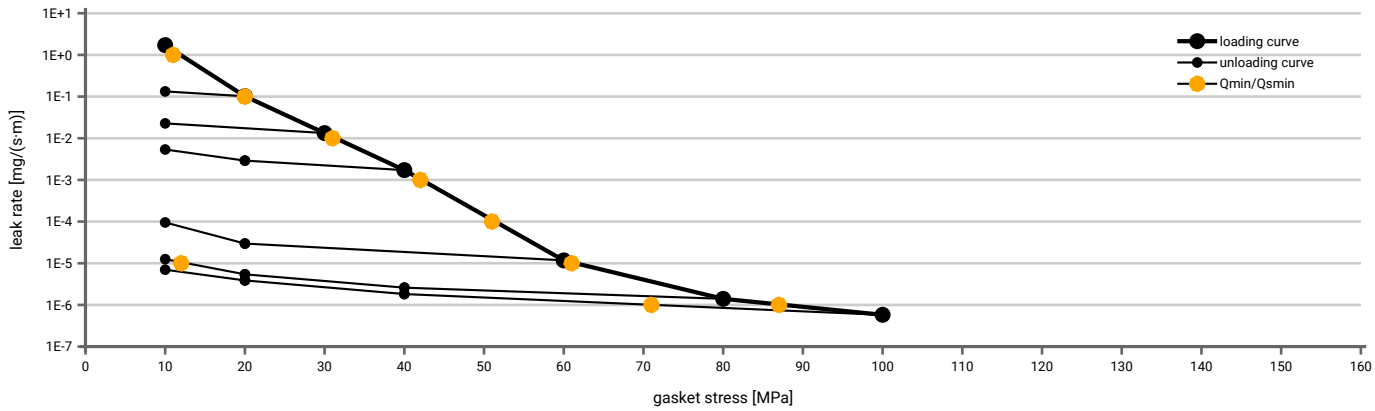
Leakage - 23 ± 2 °C / 10 bar



Minimum stress to seal $Q_{min(L)}$ (at assembly), $Q_{smin(L)}$ (after off-loading) for p = 25 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]
1E+1	10		10	10	10	10	10	10
1E-0	12		10	10	10	10	10	10
1E-1	20			10	10	10	10	10
1E-2	31				10	10	10	10
1E-3	42					10	10	10
1E-4	51					10	10	10
1E-5	62						13	10
1E-6	88							71
1E-7								
1E-8								

Leakage - 23 ± 2 °C / 25 bar



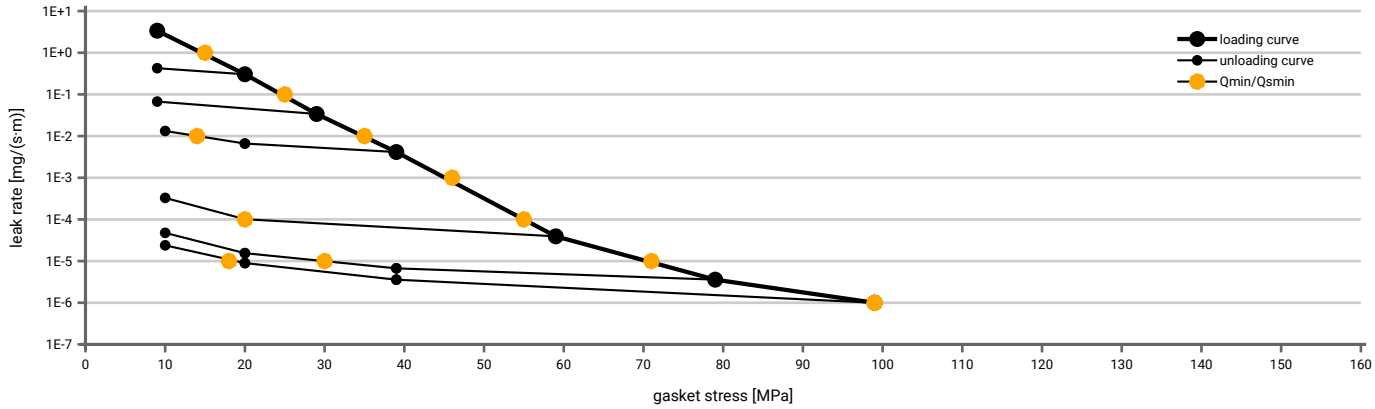
Note: the content of darkened cells was not determined respectively is unnecessary	Rev.-No.: **1**	Creation date of this sheet: **2016-01-14**

Manufacturer address	KLINGER GmbH, Richard Klinger Str. 37, 65510 Idstein, DE	According to **DIN EN 13555 2014-7**
Product name	KLINGERSIL® C4400	
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 = 40 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]
1E+1	10		10	10	10	10	10	10
1E-0	15		10	10	10	10	10	10
1E-1	25			10	10	10	10	10
1E-2	36				14	10	10	10
1E-3	46					10	10	10
1E-4	56					20	10	10
1E-5	71						30	19
1E-6	100							100
1E-7								
1E-8								

Leakage - 23 ± 2 °C / 40 bar

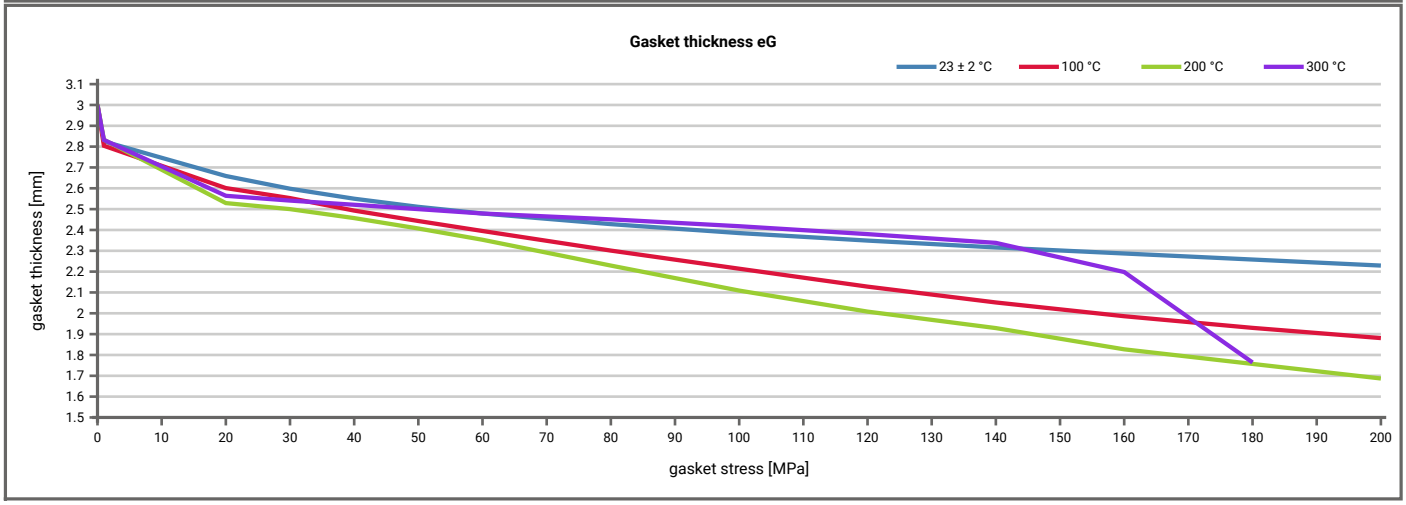


Note: the content of darkened cells was not determined respectively is unnecessary	Rev.-No.: **1**	Creation date of this sheet: **2016-01-14**

Manufacturer address	KLINGER GmbH, Richard Klinger Str. 37, 65510 Idstein, DE	According to **DIN EN 13555 2014-7**
Product name	KLINGERSIL® C4400	
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 [100 °C]**		**Temperature 2 [200 °C]**		**Temperature 3 [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]	0.92	21	0.80	50	0.68	81	0.31	174		
Stress level 2 [50 MPa]	0.94	27	0.84	67	0.75	107	0.45	231		
P_{QR} and Δe_{Gc} at maximum gasket stress to be applied Q_{smax}										
P_{QR} at Q_{smax}	0.97	50	0.80	336	0.66	571	0.51	748		
Q_{smax}	200 MPa		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 [100 °C]**		**Temperature 2 [200 °C]**		**Temperature 3 [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	3.000	0	3.000	0	3.000	0	3.000		
1	0	2.825	0	2.804	0	2.833	0	2.832		
20	1512	2.659	1328	2.601	1733	2.529	8474	2.564		
30	1864	2.598	1673	2.553	1947	2.500	7543	2.541		
40	2152	2.550	2056	2.493	2015	2.457	6242	2.521		
50	2851	2.511	2431	2.443	2323	2.407	5523	2.500		
60	3301	2.479	2714	2.395	2608	2.353	4977	2.479		
80	4107	2.428	3324	2.301	3147	2.229	6025	2.451		
100	4790	2.385	3888	2.214	3516	2.109	5816	2.418		
120	5514	2.349	4301	2.128	3760	2.008	5897	2.380		
140	5958	2.316	4740	2.052	4093	1.929	6782	2.338		
160	6466	2.287	4978	1.986	4134	1.827	6635	2.198		
180	6452	2.258	5164	1.930	4287	1.757	8780	1.764		
200	6578	2.229	5470	1.881	4432	1.687				



Note: the content of darkened cells was not determined respectively is unnecessary	Rev.-No.: **1**	Creation date of this sheet: **2016-01-14**