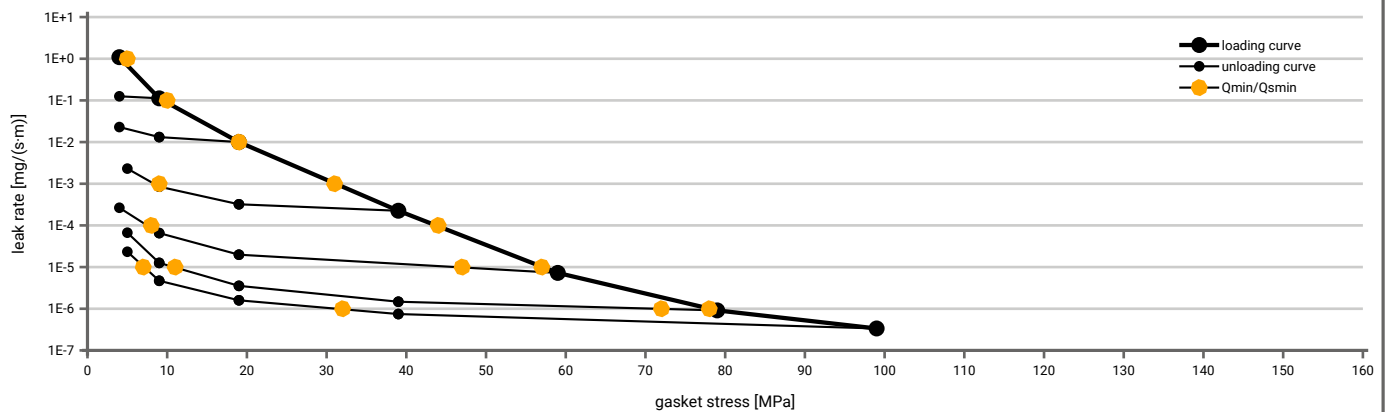


Manufacturer address	KLINGER GmbH, Richard Klinger Str. 37, 65510 Idstein, DE	According to DIN EN 13555 2005-2
Product name	KLINGERSIL® C 4400	
Product dimensions	92 x 49 x 2 mm (DIN EN 1514-1 1997-8)	

Minimum stress to seal $Q_{min(L)}$ (at assembly), $Q_{smin(L)}$ (after off-loading) for $p = 10$ bar ($T = 23 \pm 2$ °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]	$Q_A = 40$ [MPa]	$Q_A = 60$ [MPa]	$Q_A = 80$ [MPa]	$Q_A = 100$ [MPa]
1E+1	5		5	5	5	5	5	5
1E-0	5		5	5	5	5	5	5
1E-1	10			5	5	5	5	5
1E-2	20				5	5	5	5
1E-3	32				9	5	5	5
1E-4	45					8	5	5
1E-5	58					47	12	8
1E-6	79						72	32
1E-7								
1E-8								

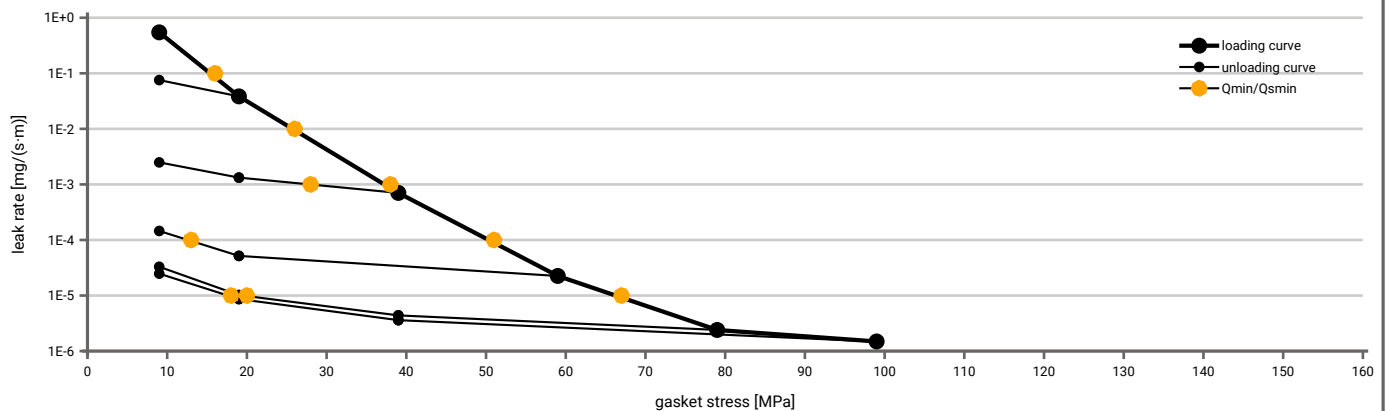
Leakage - 23 ± 2 °C / 10 bar



Minimum stress to seal $Q_{min(L)}$ (at assembly), $Q_{smin(L)}$ (after off-loading) for $p = 40$ bar ($T = 23 \pm 2$ °C)

L [mg/(s·m)]	$Q_{min(L)}$ [MPa]	$Q_{smin(L)}$ [MPa]					
		$Q_A = 9.8$ [MPa]	$Q_A = 20$ [MPa]	$Q_A = 40$ [MPa]	$Q_A = 60$ [MPa]	$Q_A = 80$ [MPa]	$Q_A = 100$ [MPa]
1E-0	10		10	10	10	10	10
1E-1	16		10	10	10	10	10
1E-2	27			10	10	10	10
1E-3	38			29	10	10	10
1E-4	51				13	10	10
1E-5	67					20	18
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.: 1

Creation date of this sheet: 2012-07-03

Manufacturer address	KLINGER GmbH, Richard Klinger Str. 37, 65510 Idstein, DE	According to DIN EN 13555 2005-2
Product name	KLINGERSIL® C 4400	
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 [100 °C]		Temperature 2 [175 °C]		Temperature 3 [200 °C]		Temperature 4 [250 °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]	0.94	15	0.85	38	0.77	59	0.75	64	0.67	83
Stress level 2 [50 MPa]	0.96	17	0.90	42	0.85	63	0.83	73	0.78	94
P_{QR} and Δe_{Gc} at maximum gasket stress to be applied Q_{smax}										
P_{QR} at Q_{smax}	0.99	17	0.91	159	0.82	302	0.82	302	0.80	344
Q_{smax}	200 MPa		200 MPa		200 MPa		200 MPa		200 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 [175 °C]		Temperature 3 [200 °C]		Temperature 4 [250 °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	2.000	0	2.000	0	2.000	0	2.000	0	2.000
1	0	1.891	0	1.942	0	1.933	0	1.921	0	1.911
20	1308	1.778	1513	1.770	2335	1.748	3452	1.736	2389	1.705
30	1776	1.735	1975	1.739	2615	1.731	2849	1.720	3391	1.690
40	2608	1.704	2520	1.707	2568	1.705	2519	1.696	3847	1.673
50	4757	1.682	2969	1.680	2629	1.677	3253	1.674	5549	1.659
60	4879	1.660	3549	1.657	3308	1.652	3632	1.652	4092	1.644
80	6424	1.631	4469	1.609	3533	1.594	3477	1.593	8388	1.623
100	6770	1.607	4536	1.564	4994	1.544	4919	1.544	6353	1.599
120	6558	1.587	5657	1.528	5035	1.495	5093	1.494	6374	1.572
140	5537	1.568	5851	1.490	5050	1.449	5102	1.450	6621	1.548
160	6213	1.555	7055	1.458	5663	1.410	5847	1.415	7492	1.527
180	7622	1.543	6340	1.424	5813	1.379	5607	1.385	7410	1.503
200	8723	1.531	7644	1.396	6894	1.354	6570	1.362	6748	1.480

