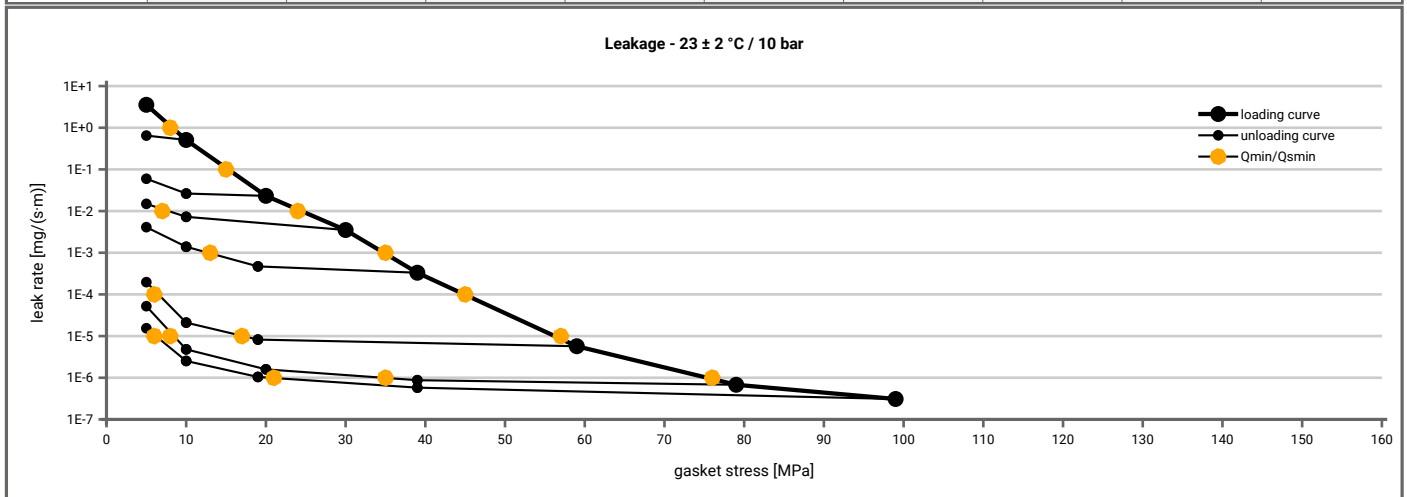
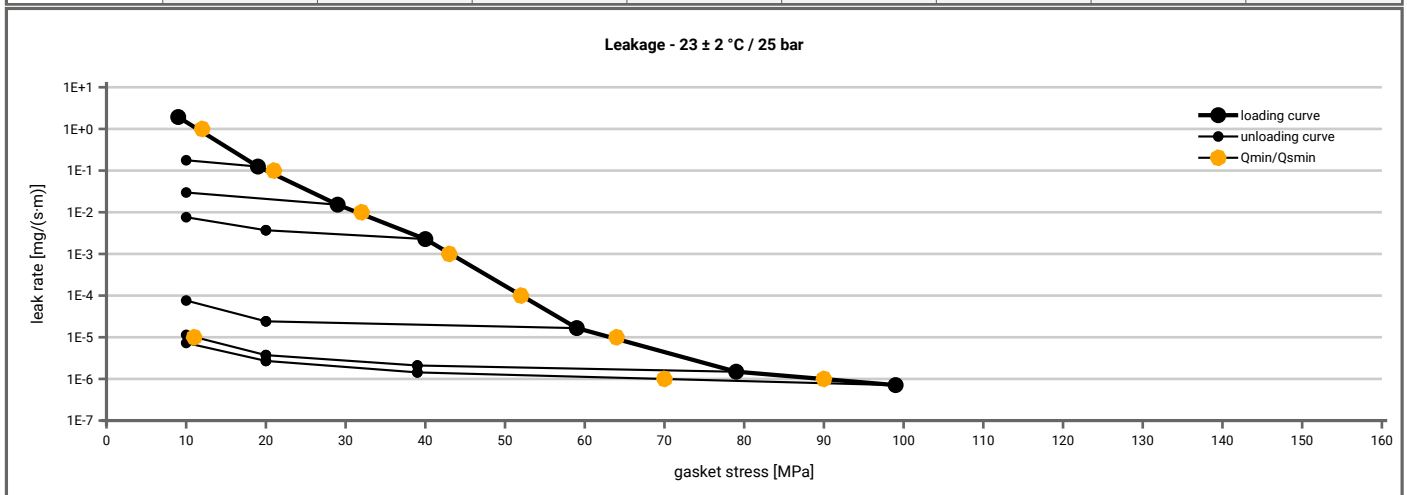


Manufacturer address	KLINGER GmbH, Richard Klinger Str. 37, 65510 Idstein, DE	According to DIN EN 13555 2005-2
Product name	KLINGERSIL® C 4430plus	
Product dimensions	92 x 49 x 2 mm (DIN EN 1514-1 1997-8)	

Minimum stress to seal $Q_{min(L)}$ (at assembly), $Q_{smin(L)}$ (after off-loading) for $p = 10 \text{ bar}$ ($T = 23 \pm 2 \text{ }^\circ\text{C}$)									
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	8		5	5	5	5	5	5	5
1E-1	15			5	5	5	5	5	5
1E-2	24				8	5	5	5	5
1E-3	35					13	5	5	5
1E-4	46						7	5	5
1E-5	57						18	9	6
1E-6	76							35	21
1E-7									
1E-8									



Minimum stress to seal $Q_{min(L)}$ (at assembly), $Q_{smin(L)}$ (after off-loading) for $p = 25 \text{ bar}$ ($T = 23 \pm 2 \text{ }^\circ\text{C}$)									
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	10
1E-0	12		10	10	10	10	10	10	10
1E-1	21			10	10	10	10	10	10
1E-2	32				10	10	10	10	10
1E-3	43					10	10	10	10
1E-4	53					10	10	10	10
1E-5	64						11	10	10
1E-6	91								71
1E-7									
1E-8									



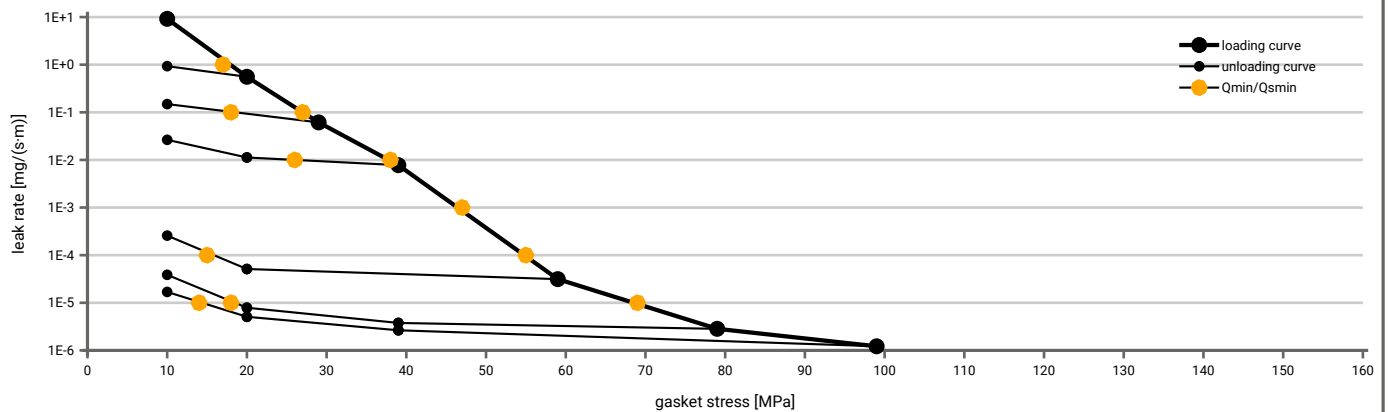
Note: the content of darkened cells was not determined respectively is unnecessary Rev.-No.: 1 Creation date of this sheet: 2014-05-22

Manufacturer address	KLINGER GmbH, Richard Klinger Str. 37, 65510 Idstein, DE	According to DIN EN 13555 2005-2
Product name	KLINGERSIL® C 4430plus	
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 $p = 40$ 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]
1E+1	10		10	10	10	10	10	10
1E-0	18		10	10	10	10	10	10
1E-1	28			19	10	10	10	10
1E-2	39				26	10	10	10
1E-3	47					10	10	10
1E-4	56					16	10	10
1E-5	69						19	14
1E-6								
1E-7								
1E-8								

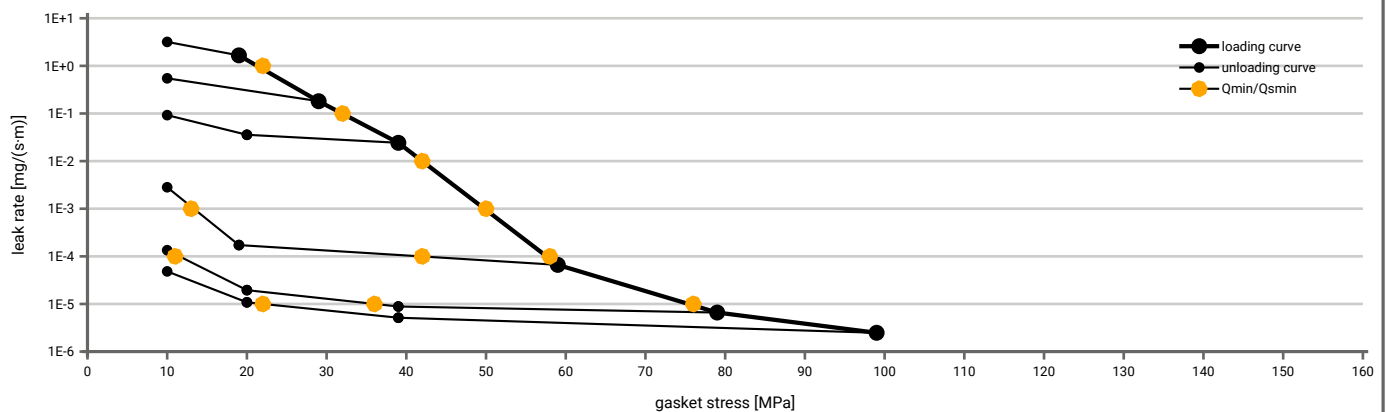
Leakage - 23 ± 2 °C / 40 bar



Minimum stress to seal $Q_{min(L)}$ (at assembly), $Q_{smin(L)}$ (after off-loading) for $p = 63$ bar ($T = 23 \pm 2$ °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]
1E+1	20	10	10	10	10	10	10
1E-0	22		10	10	10	10	10
1E-1	33			10	10	10	10
1E-2	43				10	10	10
1E-3	51				14	10	10
1E-4	59				43	12	10
1E-5	76					37	22
1E-6							
1E-7							
1E-8							

Leakage - 23 ± 2 °C / 63 bar



Note: the content of darkened cells was not determined respectively is unnecessary

Rev.-No.: 1

Creation date of this sheet: 2014-05-22

Manufacturer address	KLINGER GmbH, Richard Klinger Str. 37, 65510 Idstein, DE	According to DIN EN 13555 2005-2
Product name	KLINGERSIL® C 4430plus	
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 [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]	0.93	18	0.76	62	0.72	72	0.59	103		
Stress level 2 [50 MPa]	0.95	23	0.86	59	0.86	59	0.72	120		
P_{QR} and Δe_{Gc} at maximum gasket stress to be applied Q_{smax}										
P_{QR} at Q_{smax}	0.98	39	0.93	135	0.87	251	0.82	347		
Q_{smax}	230 MPa		230 MPa		230 MPa		230 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	2.067	0	2.087	0	2.083	0	2.058			
1	0	2.067	0	2.087	0	2.083	0	2.058			
20	1377	1.916	1232	1.868	2400	1.846	2906	1.807			
30	1923	1.876	1937	1.838	2513	1.828	4198	1.793			
40	2816	1.847	2204	1.810	2715	1.811	3416	1.775			
50	2938	1.820	2801	1.788	3279	1.799	4323	1.762			
60	3543	1.796	3315	1.772	4706	1.789	6029	1.751			
80	7063	1.772	4905	1.752	4936	1.773	7536	1.734			
100	6642	1.748	6206	1.731	5352	1.756	6757	1.717			
120	6572	1.728	8048	1.712	5866	1.739	8790	1.704			
140	8927	1.716	7681	1.690	6526	1.722	9942	1.692			
160	11166	1.706	7558	1.666	7916	1.704	9569	1.680			
180	10560	1.695	7994	1.641	7349	1.679	8859	1.669			
200	9652	1.683	8144	1.617	7523	1.649	9444	1.661			
220	8664	1.672	8455	1.593	7320	1.619	9971	1.653			
230	8468	1.665	8489	1.578	7399	1.600	10157	1.647			

