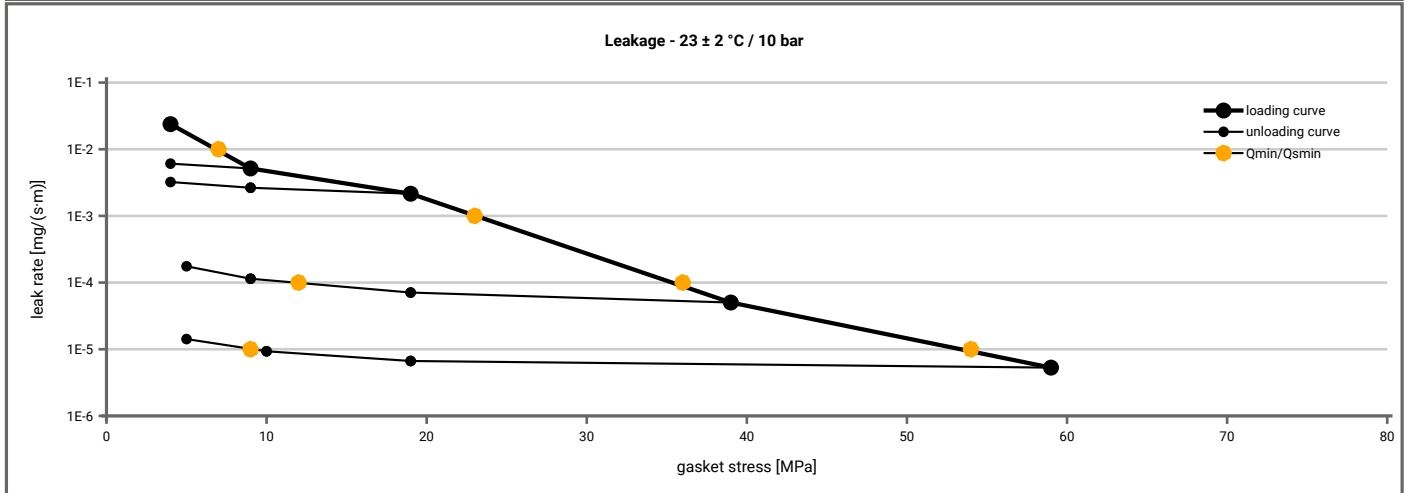
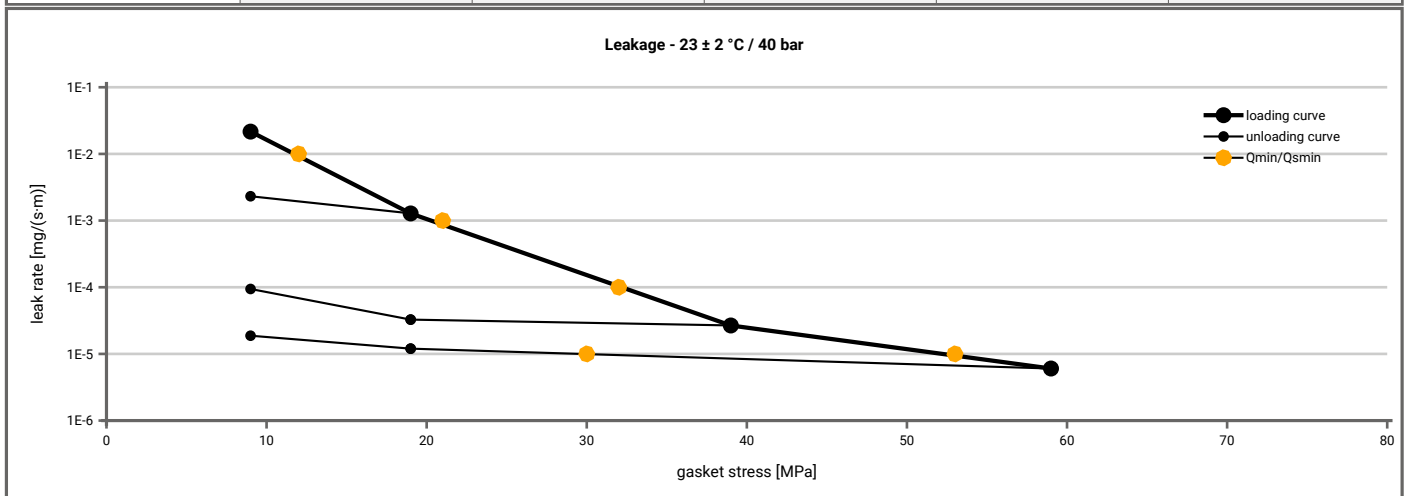


Manufacturer address	KLINGER GmbH, Richard Klinger Str. 37, 65510 Idstein, DE	According to DIN EN 13555 2005-2
Product name	KLINGER® top-chem-2006	
Product dimensions	92 x 49 x 2 mm (DIN EN 1514-1 1997-8)	

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]	$Q_A = 9.8$ [MPa]	$Q_A = 20$ [MPa]	$Q_A = 40$ [MPa]	$Q_A = 60$ [MPa]
1E-0	5		5	5	5	5
1E-1	5		5	5	5	5
1E-2	8		5	5	5	5
1E-3	24				5	5
1E-4	36				13	5
1E-5	54					9
1E-6						
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]				
		$Q_A = 9.8$ [MPa]	$Q_A = 20$ [MPa]	$Q_A = 40$ [MPa]	$Q_A = 60$ [MPa]	
1E-0	10		10	10	10	
1E-1	10		10	10	10	
1E-2	13		10	10	10	
1E-3	21			10	10	
1E-4	33			10	10	
1E-5	53				30	
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: 2012-07-03

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Product name	KLINGER® top-chem-2006	
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]		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 [10 MPa]	0.92	7	0.92	7	0.95	4				
Stress level 2 [20 MPa]	0.95	8	0.88	20	0.80	34				
P_{QR} and Δe_{Gc} at maximum gasket stress to be applied Q_{smax}										
P_{QR} at Q_{smax}	0.82	91	0.72	96	0.80	34				
Q_{smax}	60 MPa		40 MPa		20 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]		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	1.957	0	1.994	0	2.057				
1	0	1.957	0	1.994	0	2.057				
20	18063	1.941	2496	1.928	2149	1.877				
30	8932	1.919	3394	1.758						
40	29075	1.892	5216	1.610						
50	31538	1.865								
60	14955	1.763								

