

Company Address	Klinger GmbH, Rich.-Klinger-Straße 37, 65510 Idstein
Gasket Type	KLINGER® top-graph2000
Thickness e <sub>GO</sub> [mm]	2 mm

Minimum stress to seal $Q_{min/L}$ (at assembly), $Q_{Smin/L}$ (after off-loading) for p = 10 bar									
L [mg/(s*m)]	$Q_{min/L}$ [MPa]	$Q_{Smin/L}$ [MPa]							
		$Q_A = 20$ [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]
10 <sup>-0</sup>									
10 <sup>-1</sup>	13	<5	<5	<5	<5	<5			
10 <sup>-2</sup>	22		<5	<5	<5	<5			
10 <sup>-3</sup>	34		14	5	<5	<5			
10 <sup>-4</sup>	48			14	7	<5			
10 <sup>-5</sup>	64				16	9			
10 <sup>-6</sup>	86					31			
10 <sup>-7</sup>									
10 <sup>-8</sup>									

Minimum stress to seal $Q_{min/L}$ (at assembly), $Q_{Smin/L}$ (after off-loading) for p = 40 bar									
L [mg/(s*m)]	$Q_{min/L}$ [MPa]	$Q_{Smin/L}$ [MPa]							
		$Q_A = 20$ [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]
10 <sup>-0</sup>	13	<10	<10	<10	<10	<10			
10 <sup>-1</sup>	19	17	<10	<10	<10	<10			
10 <sup>-2</sup>	33		11	<10	<10	<10			
10 <sup>-3</sup>	47			13	<10	<10			
10 <sup>-4</sup>	63				16	<10			
10 <sup>-5</sup>	82					20			
10 <sup>-6</sup>									
10 <sup>-7</sup>									
10 <sup>-8</sup>									

Relaxation ratio $P_{QR}$ for stiffness $C = 500$ kN/mm						
Gasket stress [MPa]	t <sub>room</sub> [20 °C]	t 1 [100 °C]	t 2 [175 °C]	t 3 [200 °C]	t 4 [250 °C]	t 5 [300 °C]
Stress level 1 [ xx MPa]						
Stress level 2 [ xx MPa]						
$Q_{Smax}$ [200 MPa]		0,92	0,84	0,83	0,77	0,76

Maximal applicable gasket stress $Q_{Smax}$					
$Q_{Smax}$ [MPa] – ambient temperature	$Q_{Smax}$ [MPa] – temperature 1 [100 °C]	$Q_{Smax}$ [MPa] – temperature 2 [175 °C]	$Q_{Smax}$ [MPa] – temperature 3 [200 °C]	$Q_{Smax}$ [MPa] – temperature 4 [250 °C]	$Q_{Smax}$ [MPa] – temperature 5 [300 °C]
> 200	> 200	> 200	> 200	> 200	> 200

Sekant unloading modulus of the gasket $E_c$ [MPa]						
Gasket stress [MPa]	t <sub>room</sub> [20 °C]	t 1 [100 °C]	t 2 [175 °C]	t 3 [200 °C]	t 4 [250 °C]	t 5 [300 °C]
20	1229	1130	1245	1600	1975	2871
30	2315	1767	2206	1875	2953	3844
40	2554	1936	2924	2493	3154	3820
50	2839	2606	2667	2663	2923	3334
60	2952	2862	2718	3049	3688	4531
80	5263	3758	4023	3407	4186	5272
100	5535	5068	4960	4205	4551	5850
120	6014	4267	4556	4809	4198	6318
140	6114	4755	4497	4045	5915	5887
160	6196	5539	5358	5074	4642	6443
180			4790	5135	3948	6261
200						5948
220						
225						

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

Creation date of this sheet: 04.04.2008