

Company Address	Klinger GmbH, Rich.-Klinger-Straße 37, 65510 Idstein
Gasket Type	KLINGER® top-sil-ML1
Thickness e _{GO} [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 ⁻⁰									
10 ⁻¹	11	<5	<5	<5	<5	<5			
10 ⁻²	21		<5	<5	<5	<5			
10 ⁻³	36		22	6	<5	<5			
10 ⁻⁴	54			26	10	7			
10 ⁻⁵	77				55	19			
10 ⁻⁶									
10 ⁻⁷									
10 ⁻⁸									

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 ⁻⁰	11	<10	<10	<10	<10	<10			
10 ⁻¹	19	16	<10	<10	<10	<10			
10 ⁻²	32		11	<10	<10	<10			
10 ⁻³	46			12	<10	<10			
10 ⁻⁴	59			57	15	<10			
10 ⁻⁵	80					26			
10 ⁻⁶									
10 ⁻⁷									
10 ⁻⁸									

Relaxation ratio P_{QR} for stiffness $C = 500$ kN/mm						
Gasket stress [MPa]	t _{room} [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 [30 MPa]		0,87	0,82	0,84	0,80	0,75
Stress level 2 [60 MPa]		0,90	0,86	0,84	0,84	0,79
Q_{Smax} [140 / 120 MPa]			0,76	0,78		

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]
>160	>160	140	120	100

Sekant unloading modulus of the gasket E_G [MPa]					
Gasket stress [MPa]	t _{room} [20 °C]	t 1 [100 °C]	t 2 [175 °C]	t 3 [200 °C]	t 4 [250 °C]
20	1405	1802	2237	1931	1795
30	1534	2061	2844	2690	2704
40	2463	2110	2334	2895	3339
50	3388	2598	2747	4421	3205
60	3835	3259	3811	3820	3006
80	4122	4287	4737	3194	4113
100	3410	4106	4840	4381	4097
120	5346	5051	5019	4460	
140	6180	4993	5018		
160	6497	5070			
180					
200					
220					
225					

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

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