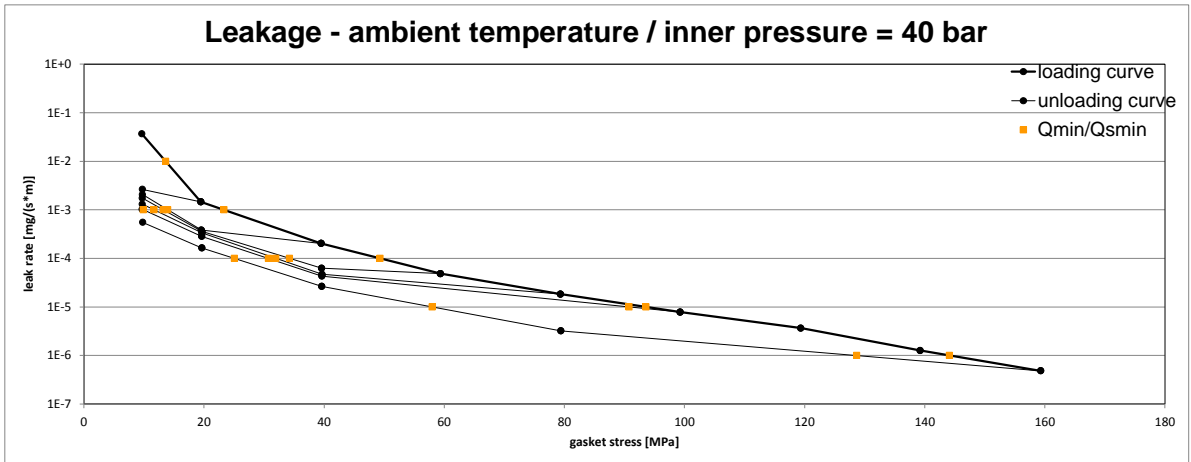
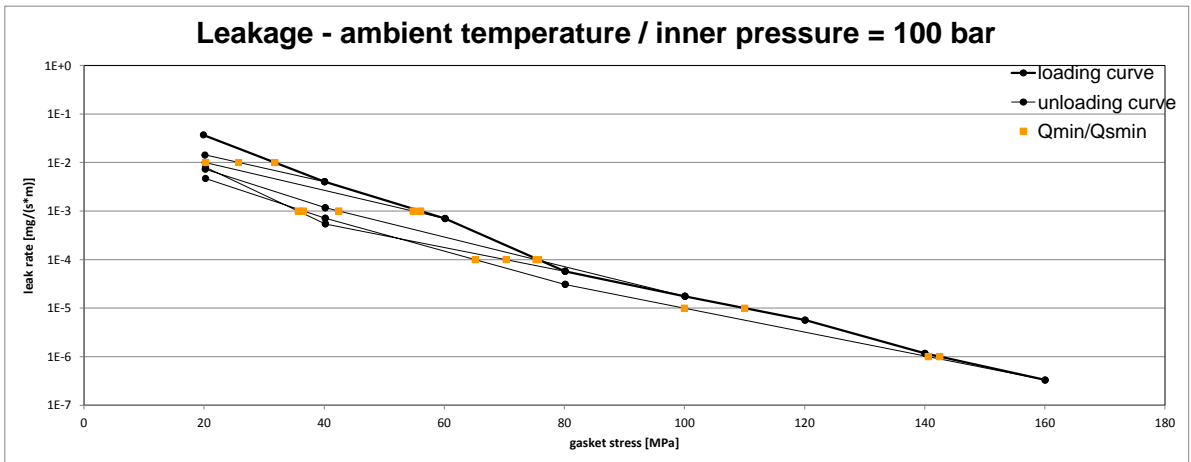


Company Address	Möller Metall dichtungen GmbH, Brunnenweg 10, 39444 Hecklingen, Germany	According to DIN EN 13555 2014-07
Gasket Type	MMK(Z) (kammprofile gasket with graphite layers)	
Sealing element dimensions [mm]	69 x 53 x 4.8	

L [mg/(s*m)]	Q _{min/L} [MPa]	Minimum stress to seal Q _{min/L} (at assembly), Q _{Smin/L} (after off-loading) for p = 40 bar									
		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	10	10	10	10	10			10		
10 ⁻¹	10	10	10	10	10	10			10		
10 ⁻²	14	10	10	10	10	10			10		
10 ⁻³	23		14	13	12	10			10		
10 ⁻⁴	49			34	32	31			25		
10 ⁻⁵	94					91			58		
10 ⁻⁶	144								129		
10 ⁻⁷											
10 ⁻⁸											



L [mg/(s*m)]	Q _{min/L} [MPa]	Minimum stress to seal Q _{min/L} (at assembly), Q _{Smin/L} (after off-loading) for p = 100 bar								
		Q _{Smin/L} [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	20	20	20	20	20			20		
10 ⁻¹	20	20	20	20	20			20		
10 ⁻²	32	26	20	20	20			20		
10 ⁻³	56		55	36	42			37		
10 ⁻⁴	76			70	75			65		
10 ⁻⁵	110							100		
10 ⁻⁶	143							141		
10 ⁻⁷										
10 ⁻⁸										

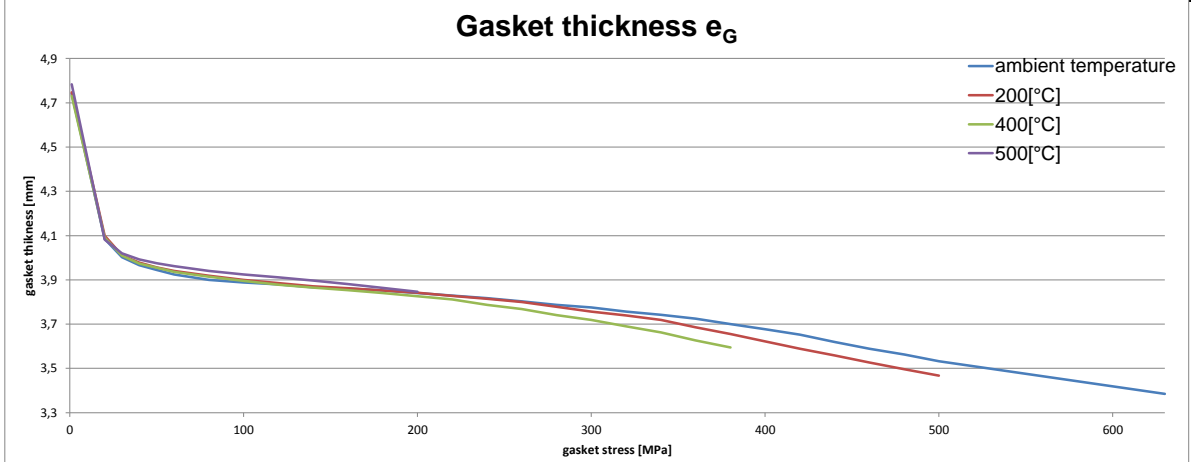


Note: the content of darkened cells was not determined respectively is unnecessary Rev - No: 4 Creation date of this sheet: 2023-08-31

Company Address	Möller Metalldichtungen GmbH, Brunnenweg 10, 39444 Hecklingen, Germany	According to DIN EN 13555 2014-07
Gasket Type	MMK(Z) (kammprofile gasket with graphite layers)	
Sealing element dimensions [mm]	69 x 53 x 4.8	

Relaxation ratio P_{QR} for stiffness $C = 500$ kN/mm										
Gasket stress	ambient temperature		temperature 1 [200 °C]		temperature 2 [400 °C]		temperature 3 [500 °C]		P_{QR}	Δe_{Gc} [mm]
	P_{QR}	Δe_{Gc} [mm]	P_{QR}	Δe_{Gc} [mm]	P_{QR}	Δe_{Gc} [mm]	P_{QR}	Δe_{Gc} [mm]		
Stress level 1 [30 MPa]	0.97	0.003	0.93	0.007	0.86	0.013	0.97	0.003		
Stress level 2 [100 MPa]	1.00	0.000	0.98	0.006	0.97	0.009	0.98	0.008		
P_{QR} and Δe_{Gc} at maximal applicable gasket stress Q_{Smax}										
P_{QR} at Q_{Smax}	0.99	0.019	0.97	0.054	0.94	0.076	0.97	0.021		
Q_{Smax}	630 MPa		500 MPa		380 MPa		200 MPa			

Sekant unloading modulus of the gasket E_G [MPa] and gasket thickness e_G [mm]											
Gasket stress [MPa]	ambient temperature		temperature 1 [200 °C]		temperature 2 [400 °C]		temperature 3 [500 °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											
1		4.742		4.747		4.732		4.784			
20	3631	4.085	4010	4.099	4854	4.091	12486	4.082			
30	4172	4.002	5003	4.012	6481	4.010	17325	4.020			
40	4755	3.966	6927	3.978	9854	3.974	13540	3.993			
50	6590	3.944	7219	3.956	9307	3.954	14904	3.975			
60	6277	3.925	8159	3.940	7828	3.936	15441	3.962			
80	8653	3.900	11870	3.919	11196	3.914	15995	3.940			
100	12550	3.888	10097	3.899	11523	3.895	16568	3.925			
120	15579	3.879	11979	3.886	10451	3.878	17169	3.911			
140	14939	3.867	12565	3.871	13728	3.866	17161	3.897			
160	16568	3.860	15545	3.862	17745	3.853	17133	3.880			
180	17829	3.852	19136	3.852	20245	3.841	17416	3.864			
200	18146	3.841	23094	3.842	21326	3.826	18039	3.847			
220	16769	3.828	21636	3.828	26196	3.812					
240	17881	3.817	23040	3.814	19090	3.787					
260	20141	3.803	24247	3.799	20264	3.768					
280	20508	3.787	20899	3.779	19527	3.741					
300	24255	3.776	19671	3.756	24006	3.719					
320	25840	3.756	24913	3.740	24034	3.690					
340	28825	3.742	29813	3.719	24385	3.662					
360	33804	3.725	21430	3.685	21775	3.626					
380	26288	3.701	22874	3.655	23455	3.595					
400	26666	3.677	26110	3.622							
420	28375	3.652	24368	3.589							
440	24859	3.620	29093	3.558							
460	24317	3.589	24020	3.526							
480	26869	3.563	26136	3.496							
500	25899	3.532	27776	3.467							
630	26631	3.385									



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