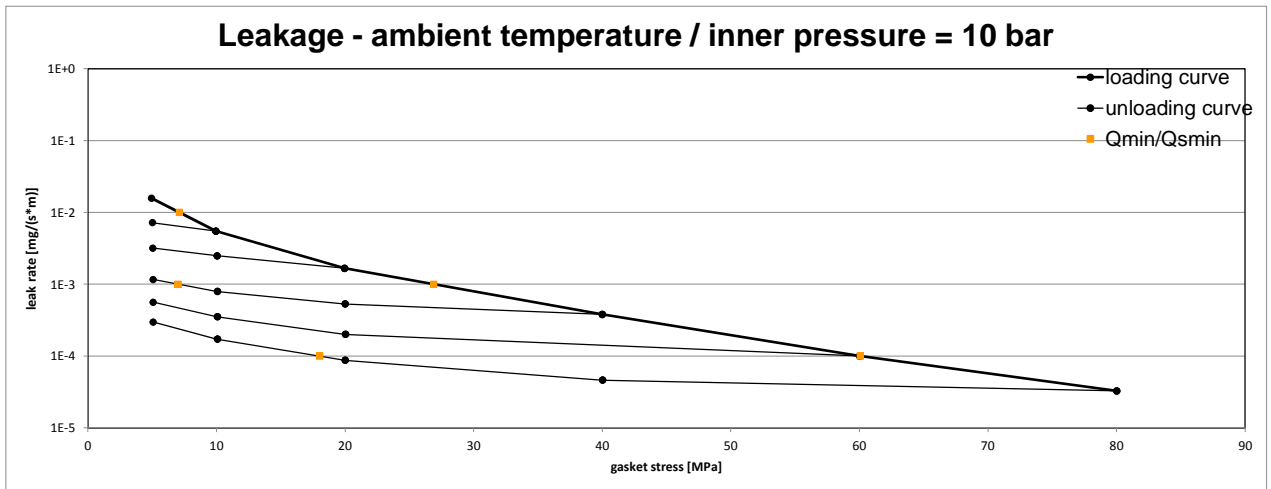
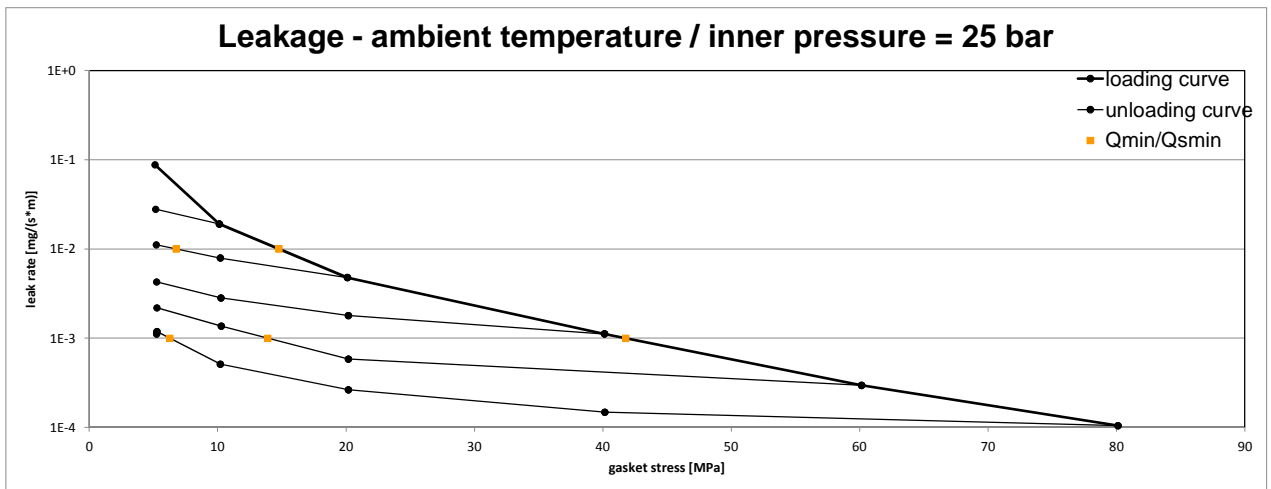


Company Address	Frenzelit-Werke, Frankenhammer 7, 95460 Bad Berneck, Germany
Gasket Type	novaphit MST / novaphit MST with XP-Technology
Sealing element dimensions [mm]	92 x 49 x 2

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 = 10 bar					Q _{Smin/L} [MPa]				
		Q _A = 10 MPa	Q _A = 20 MPa	Q _A = 40 MPa	Q _A = 60 MPa	Q _A = 80 MPa					
10 ⁰	5	5	5	5	5	5					
10 ⁻¹	5	5	5	5	5	5					
10 ⁻²	7	5	5	5	5	5					
10 ⁻³	27			7	5	5					
10 ⁻⁴	60					18					
10 ⁻⁵											
10 ⁻⁶											
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 = 25 bar					Q _{Smin/L} [MPa]				
		Q _A = 10 MPa	Q _A = 20 MPa	Q _A = 40 MPa	Q _A = 60 MPa	Q _A = 80 MPa					
10 ⁰	5	5	5	5	5	5					
10 ⁻¹	5	5	5	5	5	5					
10 ⁻²	15		7	5	5	5					
10 ⁻³	42				14	6					
10 ⁻⁴											
10 ⁻⁵											
10 ⁻⁶											
10 ⁻⁷											
10 ⁻⁸											



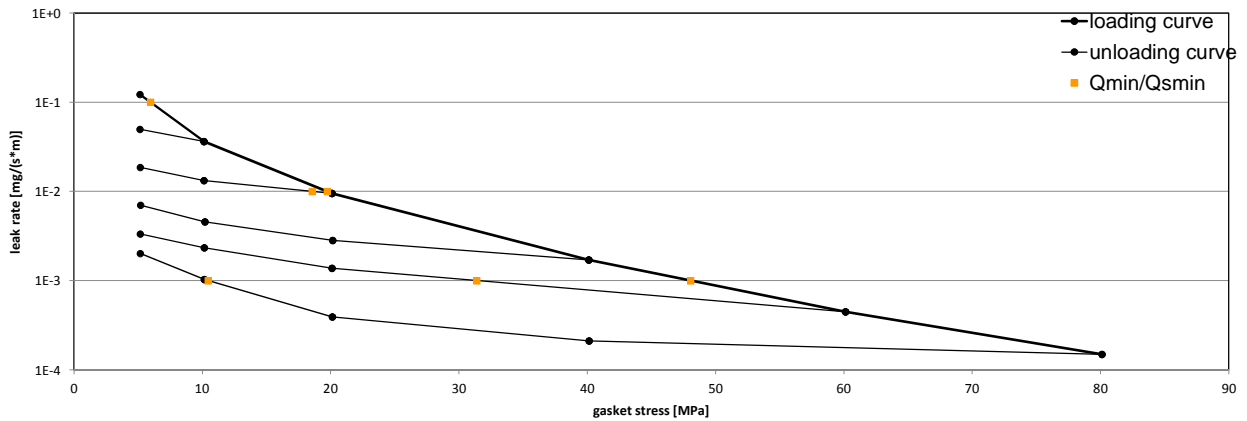
Note: the content of darkened cells was not determined respectively is unnecessary Rev - No: 3 Creation date of this sheet: 05.12.2013



Company Address	Frenzelit-Werke, Frankenhammer 7, 95460 Bad Berneck, Germany
Gasket Type	novaphit MST / novaphit MST with XP-Technology
Sealing element dimensions [mm]	92 x 49 x 2

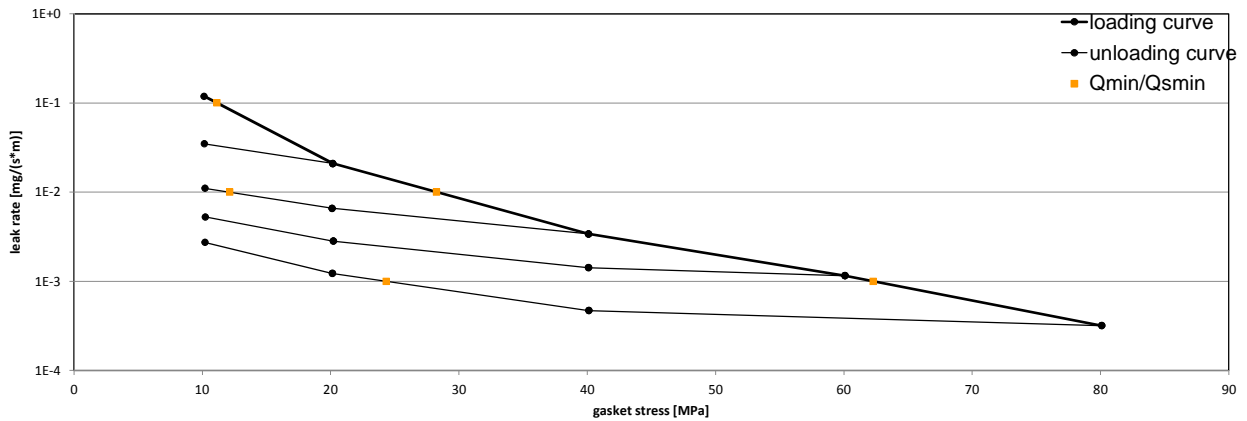
L [mg/(s*m)]	Q _{min/L} [MPa]	Minimum stress to seal Q _{min/L} (at assembly), Q _{Smin/L} (after off-loading) for p = 40 bar					Q _{Smin/L} [MPa]				
		Q _A = 10 MPa	Q _A = 20 MPa	Q _A = 40 MPa	Q _A = 60 MPa	Q _A = 80 MPa					
10 ⁰	5	5	5	5	5	5					
10 ⁻¹	6	5	5	5	5	5					
10 ⁻²	20		19	5	5	5					
10 ⁻³	48				31	10					
10 ⁻⁴											
10 ⁻⁵											
10 ⁻⁶											
10 ⁻⁷											
10 ⁻⁸											

Leakage - ambient temperature / inner pressure = 40 bar



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 = 63 bar				Q _{Smin/L} [MPa]				
		Q _A = 20 MPa	Q _A = 40 MPa	Q _A = 60 MPa	Q _A = 80 MPa					
10 ⁰	10	10	10	10	10					
10 ⁻¹	11	10	10	10	10					
10 ⁻²	28		12	10	10					
10 ⁻³	62				24					
10 ⁻⁴										
10 ⁻⁵										
10 ⁻⁶										
10 ⁻⁷										
10 ⁻⁸										

Leakage - ambient temperature / inner pressure = 63 bar



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

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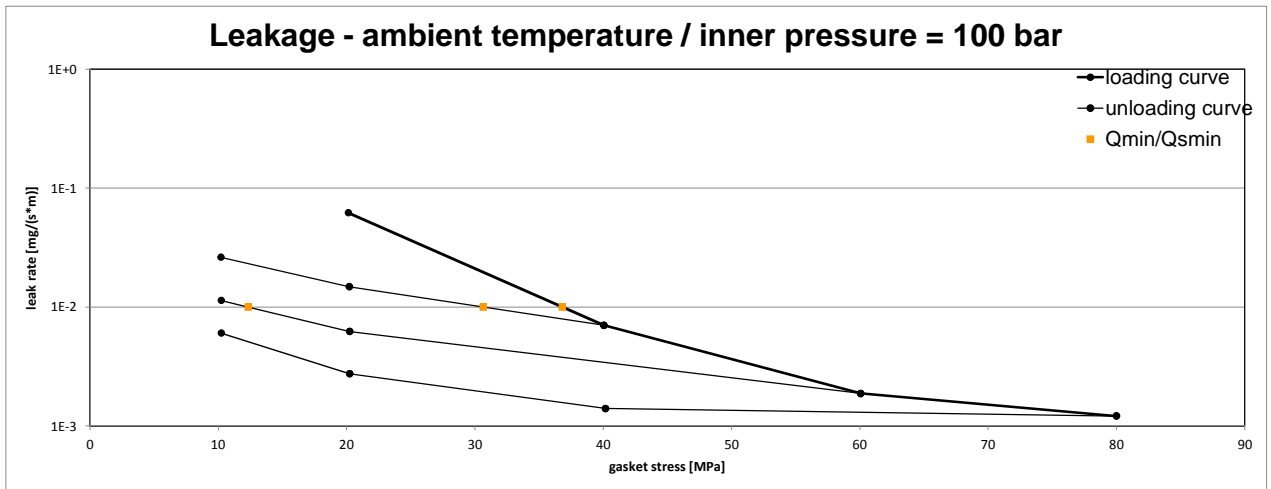
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Center of Sealing Technologies, Bürgerkamp 3, 48565 Steinfurt, Germany

Company Address	Frenzelit-Werke, Frankenhammer 7, 95460 Bad Berneck, Germany
Gasket Type	novaphit MST / novaphit MST with XP-Technology
Sealing element dimensions [mm]	92 x 49 x 2

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 _A = 40 MPa	Q _A = 60 MPa	Q _A = 80 MPa						
10 ⁰	20	10	10	10						
10 ⁻¹	20	10	10	10						
10 ⁻²	37	31	12	10						
10 ⁻³										
10 ⁻⁴										
10 ⁻⁵										
10 ⁻⁶										
10 ⁻⁷										
10 ⁻⁸										



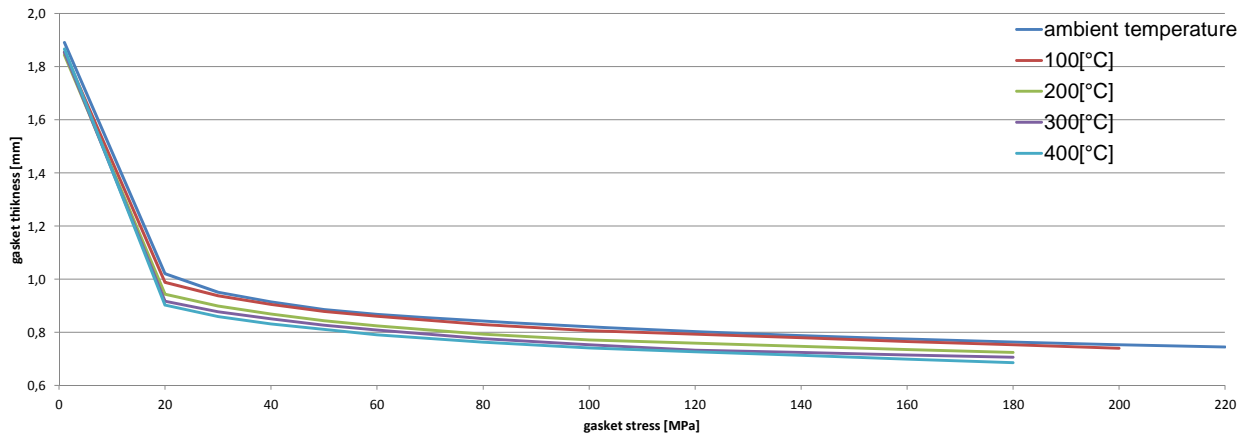
Company Address	Frenzelit-Werke, Frankenhammer 7, 95460 Bad Berneck, Germany
Gasket Type	novaphit MST / novaphit MST with XP-Technology
Sealing element dimensions [mm]	92 x 49 x 2

Relaxation ratio P_{QR} for stiffness $C = 500$ kN/mm					
Gasket stress [MPa]	ambient temperature	temperature 1 [100 °C]	temperature 2 [200 °C]	temperature 3 [300 °C]	temperature 4 [400 °C]
Stress level 1 [30 MPa]	0,98	0,93	0,89	0,91	0,92
Stress level 2 [50 MPa]	0,99	0,96	0,93	0,95	0,95
PQR at Q_{Smax}	1,00 at 220 MPa	0,98 at 200 MPa	0,96 at 180 MPa	0,95 at 180 MPa	0,96 at 180 MPa

Maximal applicable gasket stress Q_{Smax}				
Q_{Smax} [MPa] ambient temperature	Q_{Smax} [MPa] – temperature 1 [100 °C]	Q_{Smax} [MPa] – temperature 2 [200 °C]	Q_{Smax} [MPa] – temperature 3 [300 °C]	Q_{Smax} [MPa] – temperature 4 [400 °C]
220	200	180	180	180

Sekant unloading modulus of the gasket E_G [MPa] and gasket thickness e_G [mm]										
Gasket stress [MPa]	ambient temperature		temperature 1 [100 °C]		temperature 2 [200 °C]		temperature 3 [300 °C]		temperature 4 [400 °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		1,891		1,854		1,844		1,854		1,866
20	465	1,020	440	0,988	513	0,943	470	0,916	479	0,902
30	741	0,951	1132	0,938	802	0,899	800	0,877	602	0,858
40	1110	0,914	1155	0,905	1118	0,869	1228	0,850	1271	0,831
50	1270	0,885	1504	0,878	1341	0,843	1420	0,826	1390	0,810
60	1988	0,867	1921	0,860	1696	0,824	1748	0,808	1763	0,790
80	2792	0,842	2683	0,829	2750	0,793	2124	0,775	2245	0,762
100	2980	0,820	2666	0,806	3586	0,771	2581	0,753	2636	0,740
120	3780	0,802	4561	0,792	4514	0,759	2938	0,733	3795	0,726
140	4756	0,788	5405	0,780	5600	0,747	4036	0,723	5165	0,713
160	4881	0,774	5105	0,765	5894	0,734	5113	0,714	5000	0,698
180	5150	0,762	5491	0,753	5825	0,724	5861	0,706	4845	0,686
200	5459	0,752	5679	0,739						
220	5750	0,744								

Gasket thickness e_G



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