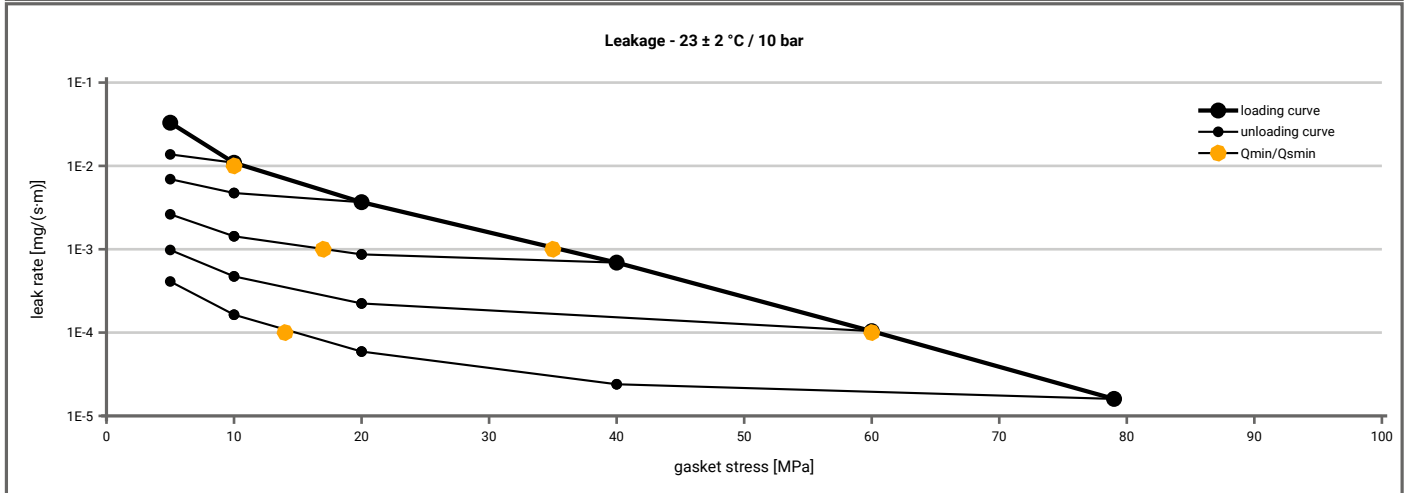
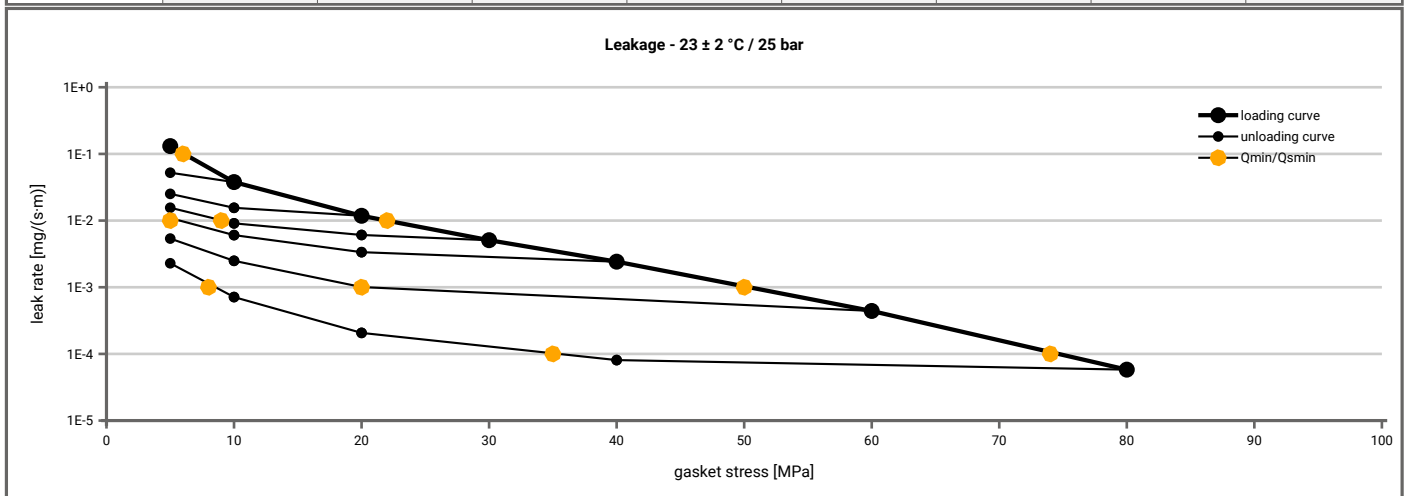


Manufacturer address	Frenzelit GmbH, Frankenhammer, 95460 Bad Berneck, DE	According to <b>DIN EN 13555</b> <b>2005-2</b>
Product name	novatec PREMIUM XP	
Product dimensions	92 x 49 x 2 mm (DIN EN 1514-1 1997-8)	

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]	$Q_A = 10$ [MPa]	$Q_A = 20$ [MPa]	$Q_A = 40$ [MPa]	$Q_A = 60$ [MPa]	$Q_A = 80$ [MPa]
1E-0	5		5	5	5	5	5
1E-1	5		5	5	5	5	5
1E-2	11			5	5	5	5
1E-3	36				17	5	5
1E-4	60						15
1E-5							
1E-6							
1E-7							
1E-8							



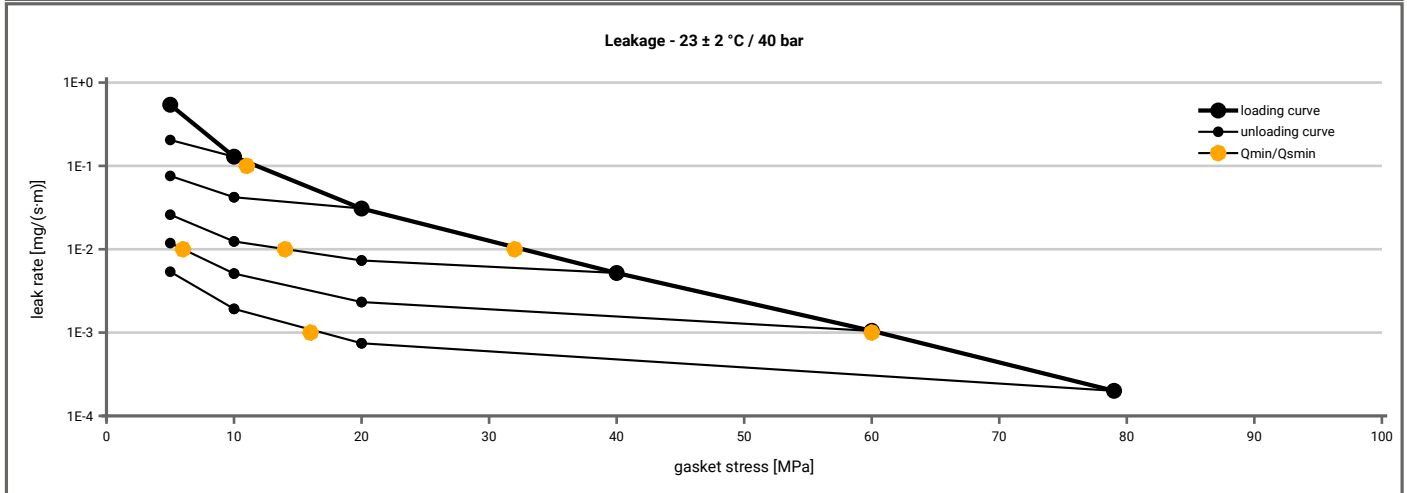
Minimum stress to seal $Q_{min(L)}$ (at assembly), $Q_{smin(L)}$ (after off-loading) for $p = 25$ bar ( $T = 23 \pm 2$ °C)								
L [mg/(s·m)]	$Q_{min(L)}$ [MPa]	$Q_{smin(L)}$ [MPa]						
		$Q_A = 5$ [MPa]	$Q_A = 10$ [MPa]	$Q_A = 20$ [MPa]	$Q_A = 30$ [MPa]	$Q_A = 40$ [MPa]	$Q_A = 60$ [MPa]	$Q_A = 80$ [MPa]
1E-0	5		5	5	5	5	5	5
1E-1	6		5	5	5	5	5	5
1E-2	22				9	6	5	5
1E-3	50						20	9
1E-4	75							36
1E-5								
1E-6								
1E-7								
1E-8								



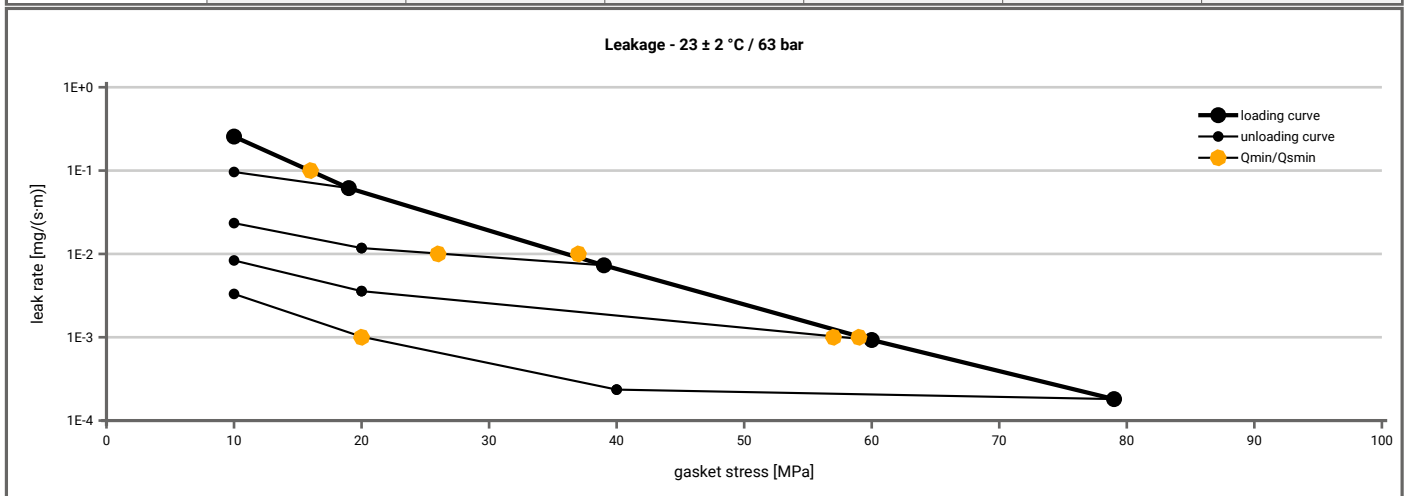
Note: the content of darkened cells was not determined respectively is unnecessary      Rev.-No.: 1      Creation date of this sheet: 2013-07-04

<b>Manufacturer address</b>	Frenzelit GmbH, Frankenhammer, 95460 Bad Berneck, DE	According to <b>DIN EN 13555</b> <b>2005-2</b>
<b>Product name</b>	novatec PREMIUM XP	
<b>Product dimensions</b>	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 $p = 40$ bar ( $T = 23 \pm 2$ °C)							
L [mg/(s·m)]	$Q_{min(L)}$ [MPa]	$Q_{smin(L)}$ [MPa]					
		$Q_A = 5$ [MPa]	$Q_A = 10$ [MPa]	$Q_A = 20$ [MPa]	$Q_A = 40$ [MPa]	$Q_A = 60$ [MPa]	$Q_A = 80$ [MPa]
1E-0	5		5	5	5	5	5
1E-1	12			5	5	5	5
1E-2	33				14	6	5
1E-3	61						17
1E-4							
1E-5							
1E-6							
1E-7							
1E-8							



Minimum stress to seal $Q_{min(L)}$ (at assembly), $Q_{smin(L)}$ (after off-loading) for $p = 63$ bar ( $T = 23 \pm 2$ °C)						
L [mg/(s·m)]	$Q_{min(L)}$ [MPa]	$Q_{smin(L)}$ [MPa]				
		$Q_A = 10$ [MPa]	$Q_A = 20$ [MPa]	$Q_A = 40$ [MPa]	$Q_A = 60$ [MPa]	$Q_A = 80$ [MPa]
1E-0	10		10	10	10	10
1E-1	17		10	10	10	10
1E-2	37			27	10	10
1E-3	59				58	20
1E-4						
1E-5						
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: 2013-07-04

<b>Manufacturer address</b>	Frenzelit GmbH, Frankenhammer, 95460 Bad Berneck, DE	According to <b>DIN EN 13555</b> <b>2005-2</b>
<b>Product name</b>	novatec PREMIUM XP	
<b>Product dimensions</b>	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 [200 °C]		Temperature 3 [300 °C]		$P_{QR}$	$\Delta e_{Gc}$ [µm]
	$P_{QR}$	$\Delta e_{Gc}$ [µm]	$P_{QR}$	$\Delta e_{Gc}$ [µm]	$P_{QR}$	$\Delta e_{Gc}$ [µm]	$P_{QR}$	$\Delta e_{Gc}$ [µm]		
Stress level 1 [30 MPa]	0.97	9	0.90	26	0.86	35	0.71	74		
$P_{QR}$ and $\Delta e_{Gc}$ at maximum gasket stress to be applied $Q_{Smax}$										
$P_{QR}$ at $Q_{Smax}$	0.94	91	0.76	247	0.78	148	0.79	106		
$Q_{Smax}$	180 MPa		120 MPa		80 MPa		60 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 [200 °C]		Temperature 3 [300 °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	1.942	0	1.931	0	1.935	0	1.929		
1	0	1.944	0	1.931	0	1.937	0	1.929		
20	1646	1.875	1166	1.835	1362	1.833	3641	1.803		
30	1583	1.850	1536	1.814	2463	1.820	3083	1.788		
40	2029	1.830	2203	1.794	2806	1.804	4790	1.777		
50	2450	1.812	2655	1.776	3397	1.789	4314	1.765		
60	2640	1.793	3275	1.759	3491	1.772	4427	1.754		
80	3680	1.772	4006	1.719	3817	1.700				
100	5132	1.756	9809	1.668						
120	6595	1.741	6709	1.576						
140	5535	1.721								
160	4987	1.700								
180	4492	1.681								

