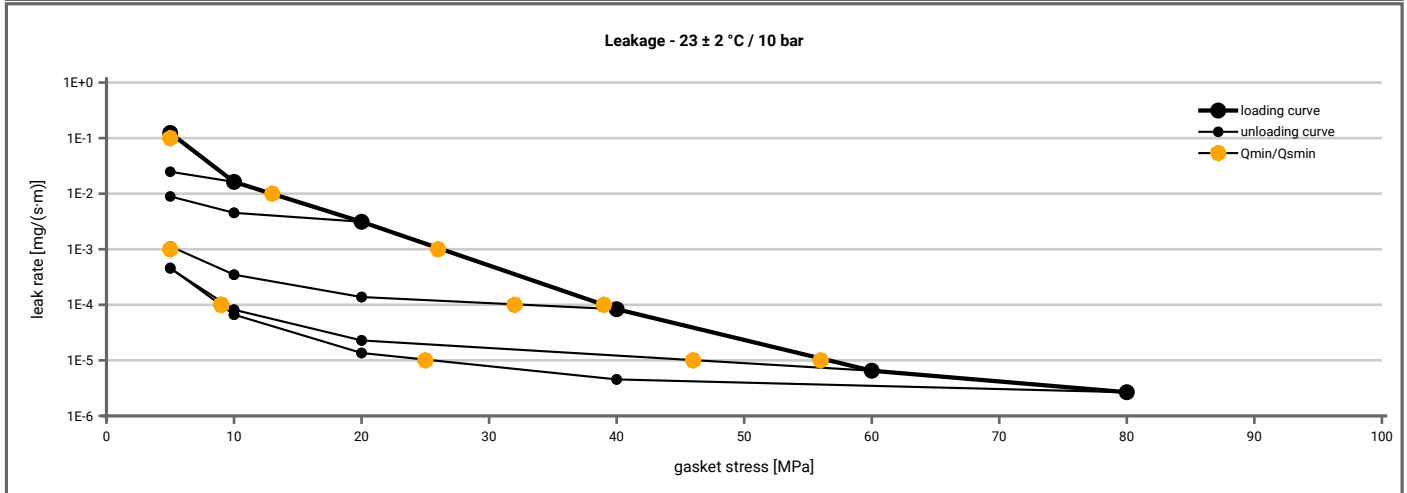


Manufacturer address	Frenzelit GmbH, Frankenhammer, 95460 Bad Berneck, DE	According to DIN EN 13555 2014-7
Product name	novapress® UNIVERSAL	
Product dimensions	92 x 49 x 2 mm (DIN EN 1514-1 1997-8)	

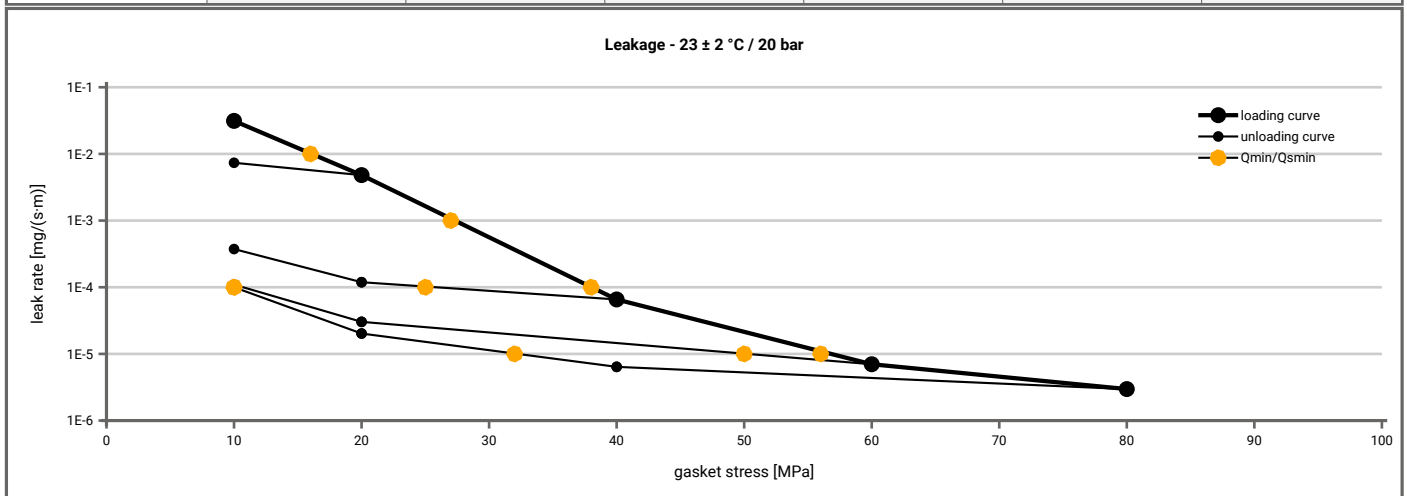
Minimum stress to seal $Q_{min(L)}$ (at assembly), $Q_{smin(L)}$ (after off-loading) for $p = 10$ bar ($T = 23 \pm 2$ °C)

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	6		5	5	5	5	5
1E-2	13			5	5	5	5
1E-3	26				6	5	5
1E-4	39				33	10	9
1E-5	57					47	26
1E-6							
1E-7							
1E-8							



Minimum stress to seal $Q_{min(L)}$ (at assembly), $Q_{smin(L)}$ (after off-loading) for $p = 20$ 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	10		10	10	10	10
1E-2	16		10	10	10	10
1E-3	27			10	10	10
1E-4	38			26	11	10
1E-5	57				50	32
1E-6						
1E-7						
1E-8						



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

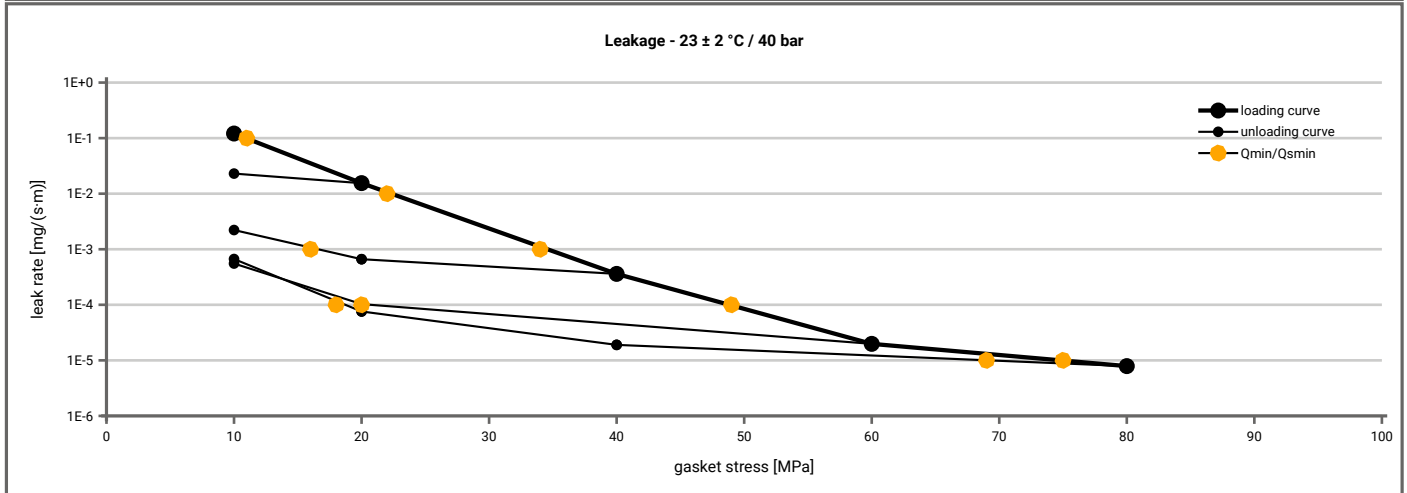
Rev.-No.: 1

Creation date of this sheet: 2015-04-23

Manufacturer address	Frenzelit GmbH, Frankenhammer, 95460 Bad Berneck, DE	According to DIN EN 13555 2014-7
Product name	novapress® UNIVERSAL	
Product dimensions	92 x 49 x 2 mm (DIN EN 1514-1 1997-8)	

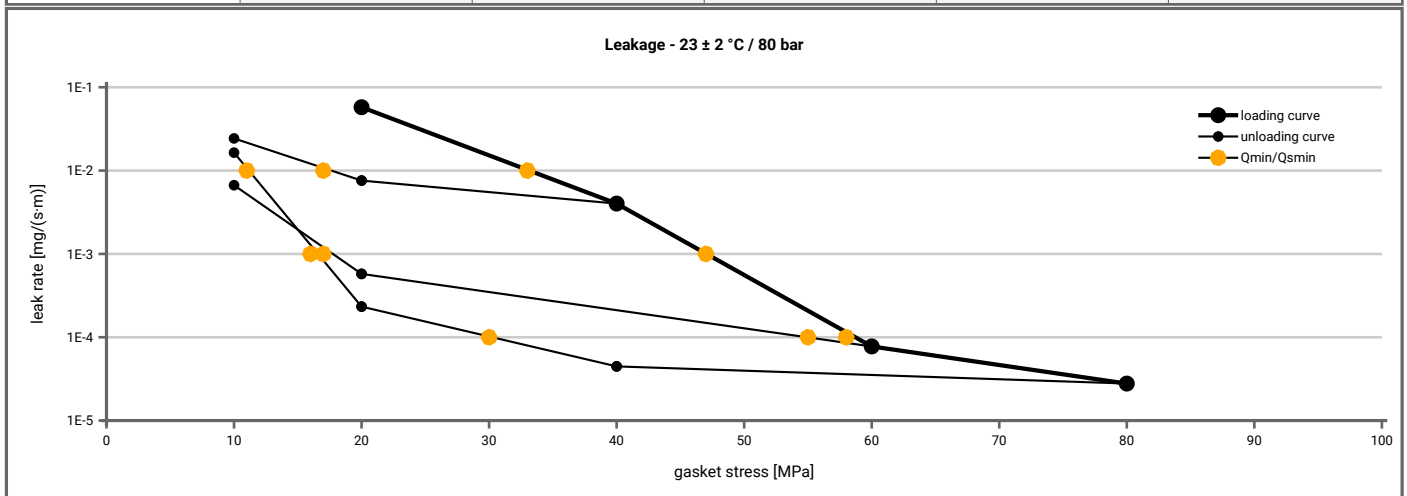
Minimum stress to seal $Q_{min(L)}$ (at assembly), $Q_{smin(L)}$ (after off-loading) for $p = 40$ bar ($T = 23 \pm 2$ °C)

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	11		10	10	10	10
1E-2	22			10	10	10
1E-3	35			17	10	10
1E-4	49				21	19
1E-5	75					69
1E-6						
1E-7						
1E-8						



Minimum stress to seal $Q_{min(L)}$ (at assembly), $Q_{smin(L)}$ (after off-loading) for $p = 80$ bar ($T = 23 \pm 2$ °C)

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]
1E-0	20		10	10	10
1E-1	20		10	10	10
1E-2	33		18	10	11
1E-3	47			18	17
1E-4	59			55	30
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: 2015-04-23

Manufacturer address	Frenzelit GmbH, Frankenhammer, 95460 Bad Berneck, DE	According to DIN EN 13555 2014-7
Product name	novapress® UNIVERSAL	
Product dimensions	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]		P_{QR}	Δe_{Gc} [µm]	P_{QR}	Δe_{Gc} [µm]
	P_{QR}	Δe_{Gc} [µm]	P_{QR}	Δe_{Gc} [µm]	P_{QR}	Δe_{Gc} [µm]				
Stress level 1 [30 MPa]	0.98	6	0.89	28	0.82	47				
P_{QR} and Δe_{Gc} at maximum gasket stress to be applied Q_{smax}										
P_{QR} at Q_{smax}	0.97	58	0.87	227	0.79	282				
Q_{smax}	230 MPa		200 MPa		160 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]		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	1.920	0	1.907	0	1.925				
1	0	1.913	0	1.894	0	1.922				
20	1716	1.848	1862	1.826	3149	1.836				
30	4213	1.835	1662	1.799	2757	1.817				
40	4762	1.820	2662	1.774	2344	1.791				
50	3745	1.801	3595	1.747	3519	1.759				
60	3739	1.780	3030	1.710	4836	1.731				
80	13191	1.759	6731	1.659	3890	1.650				
100	5676	1.729	3768	1.596	6601	1.577				
120	6622	1.706	6172	1.545	4257	1.502				
140	8678	1.687	5510	1.487	5045	1.443				
160	8692	1.668	5755	1.436	5930	1.396				
180	7714	1.649	5580	1.388						
200	9424	1.631	8311	1.351						
220	7575	1.607								
230	7393	1.595								

