

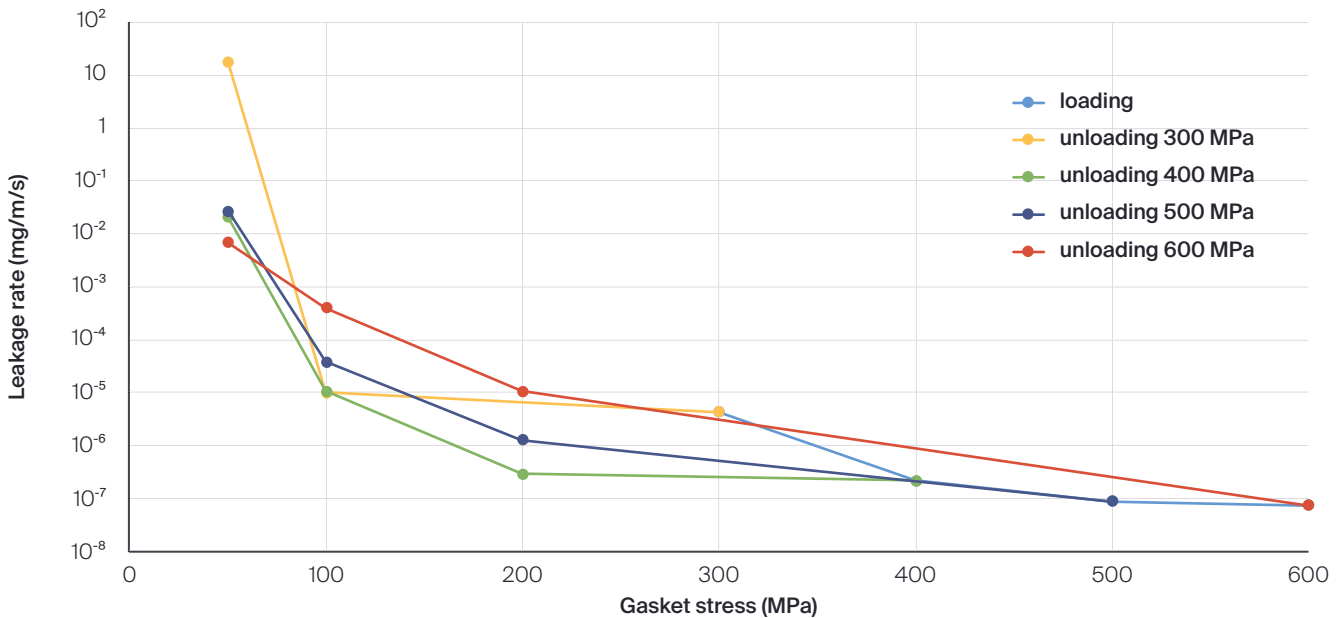
Revision No.: 2	Creation date of this data sheet: 05.12.2022	Page 3 / 8
Manufacturer address	Pipeotech AS, Molandsveien 10, 4994 Akland, Norway	According to DIN EN 13555:2021
Product name	DeltaV-Seal 800HT	
Product dimensions	78 x 75 x 3.8 mm (DIN EN 1514-2:2014)	

Leakage Data

40 Bar

Minimum stress to seal Q_{min} (L) (at assembly), Q_{smin} (L) (after off-loading) for P = 40 bar (T = 200°C)								
L (mg/s/m)	Q_{min} (L) (MPa)	Q_{smin} (L) (MPa) for effective gasket stress						
		$Q_A = 100$ MPa	$Q_A = 150$ MPa	$Q_A = 200$ MPa	$Q_A = 300$ MPa	$Q_A = 400$ MPa	$Q_A = 500$ MPa	$Q_A = 600$ MPa
1.00E+00	200				56	50	50	50
1.00E-01	254				60	50	50	50
1.00E-02	263				63	54	56	52
1.00E-03	271				74	61	65	73
1.00E-04	280				87	78	81	117
1.00E-05	288				108	101	124	174
1.00E-06	325					165	197	259
1.00E-07								
1.00E-08								

Leakage curves 200°C, 40 bar



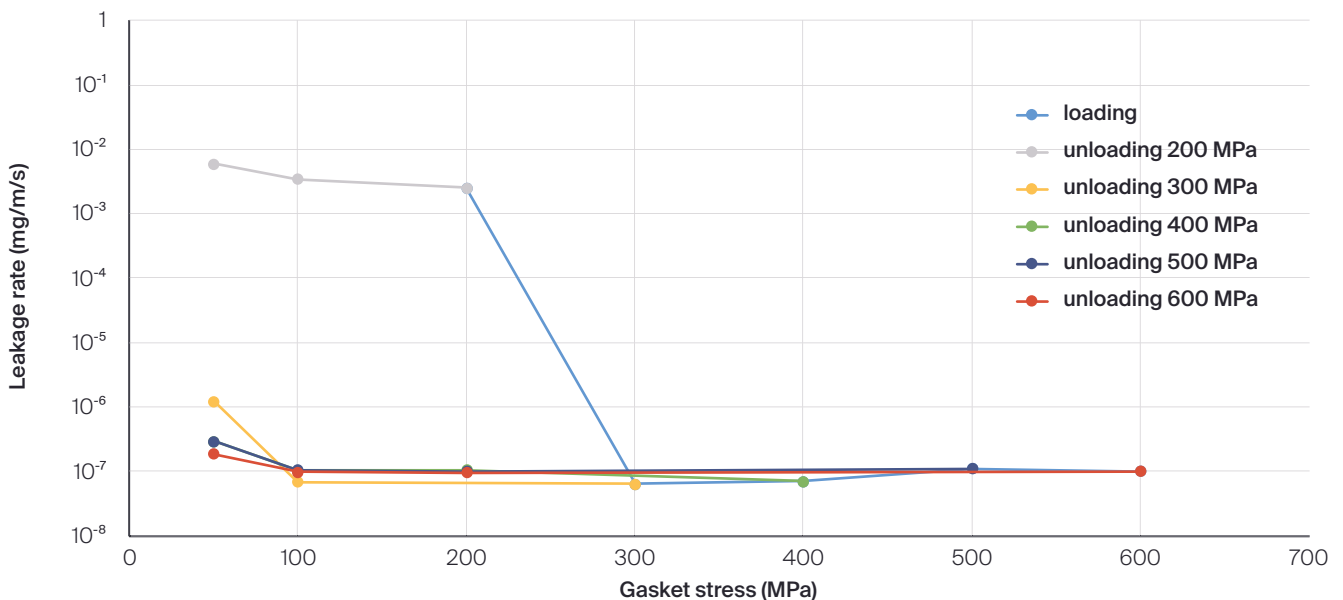
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Leakage Data

40 Bar

Minimum stress to seal Q_{min} (L) (at assembly), Q_{smin} (L) (after off-loading) for P = 40 bar (T = 400°C)								
L (mg/s/m)	Q_{min} (L) (MPa)	Q_{smin} (L) (MPa) for effective gasket stress						
		$Q_A = 100$ MPa	$Q_A = 150$ MPa	$Q_A = 200$ MPa	$Q_A = 300$ MPa	$Q_A = 400$ MPa	$Q_A = 500$ MPa	$Q_A = 600$ MPa
1.00E+00	125			50	50	50	50	50
1.00E-01	125			50	50	50	50	50
1.00E-02	125			50	50	50	50	50
1.00E-03	183				50	50	50	50
1.00E-04	199				50	50	50	50
1.00E-05	214				50	50	50	50
1.00E-06	229				57	50	50	50
1.00E-07								
1.00E-08								
1.00E-09								
1.00E-10								

Leakage curves 400°C, 40 bar



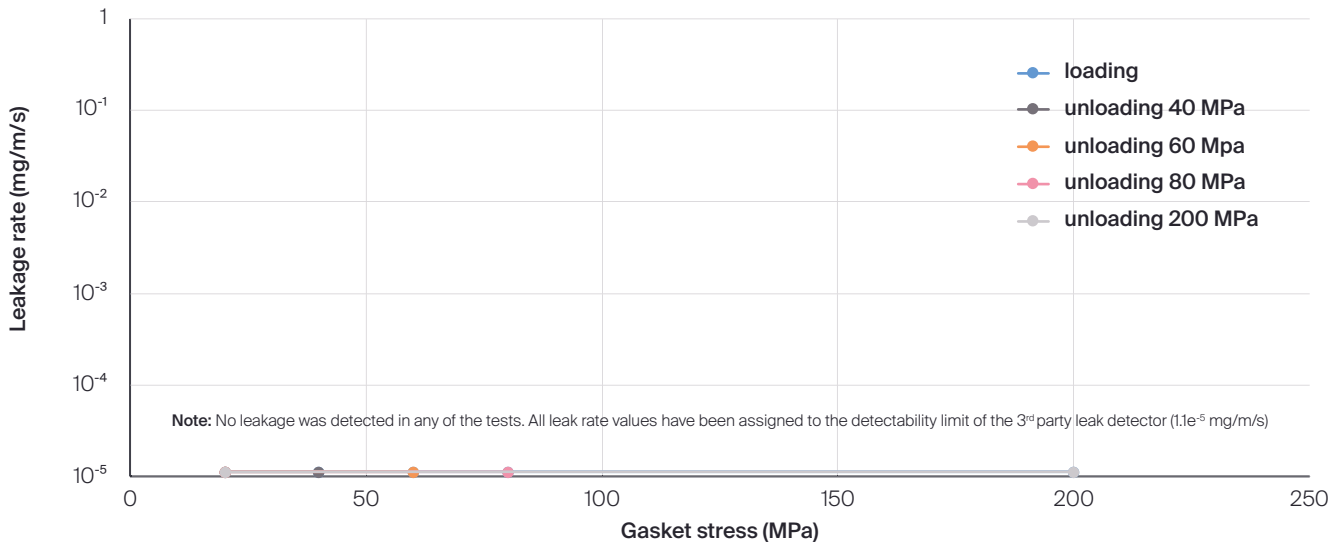
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Leakage Data

10 Bar

Minimum stress to seal Q_{min} (L) (at assembly), Q_{smin} (L) (after off-loading) for P = 10 bar (T = 880°C)						
L (mg/s/m)	Q_{min} (L) (MPa)	Q_{smin} (L) (MPa) for effective gasket stress				
		$Q_A = 40$ MPa	$Q_A = 60$ MPa	$Q_A = 120$ MPa	$Q_A = 160$ MPa	$Q_A = 200$ MPa
1.00E+00	20	20	20	20	20	20
1.00E-01	20	20	20	20	20	20
1.00E-02	20	20	20	20	20	20
1.00E-03	20	20	20	20	20	20
1.00E-04	20	20	20	20	20	20
1.00E-05	At all gasket stress levels up to 200 MPa the leak rate was below $1.1e^{-5}$ mg/m/s. In the leakage tests the detection of the leak rate was limited to $1.1e^{-5}$ mg/m/s which was close to the resolution limit of the 3 rd party leak detector. In all unloading cycles no increase of the leak rate during unloading to 20 MPa could be detected.					
1.00E-06						
1.00E-07						
1.00E-08						
1.00E-09						
1.00E-10						

Leakage curves 880°C, 10 bar



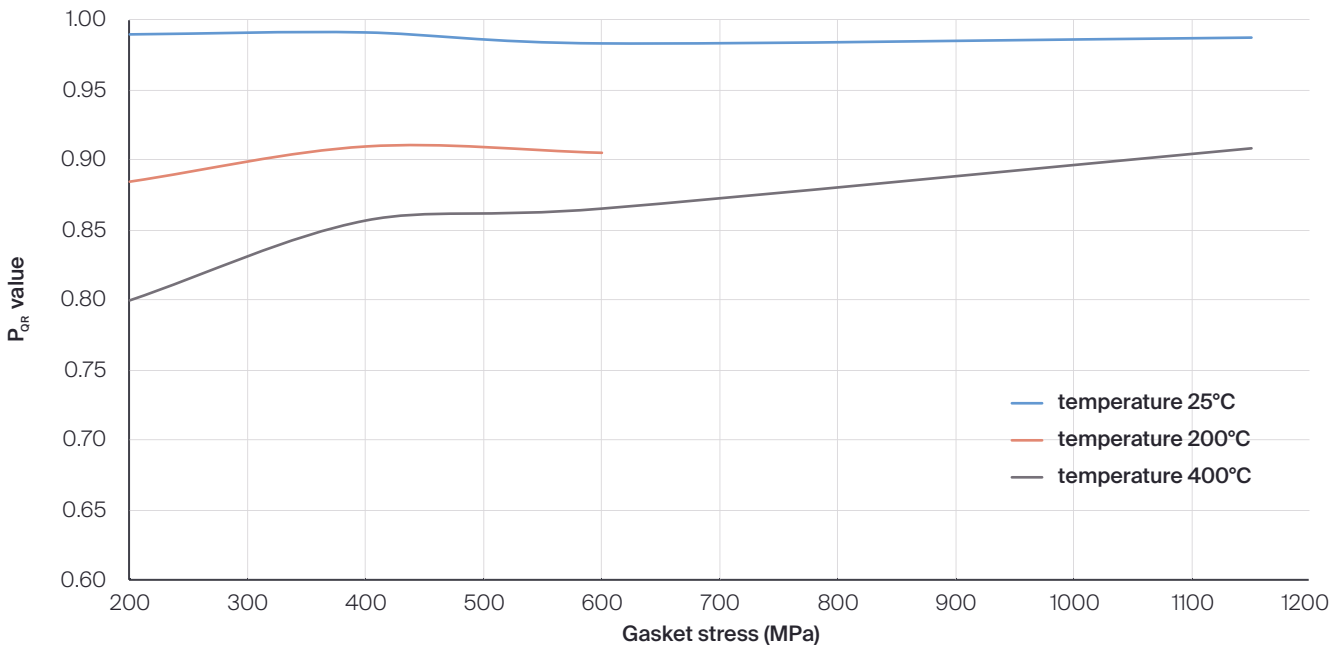
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Relaxation values

Relaxation Ratio P_{QR} for stiffness $C = 500$ kN/mm								
Gasket Stress	Temperature 25°C		Temperature 200°C		Temperature 400°C		Temperature 880°C	
	P_{QR}	Δe_{GC} (μm)	P_{QR}	Δe_{GC} (μm)	P_{QR}	Δe_{GC} (μm)	P_{QR}	Δe_{GC} (μm)
Stress level 1 (200 MPa)	0.99	2	0.88	17	0.80	29	0.16	121
Stress level 1 (400 MPa)	0.99	3	0.91	26	0.86	41		
Stress level 1 (600 MPa)	0.98	8	0.91	41	0.87	58		
Stress level 1 (1150 MPa)	0.99	11			0.91	75		

P_{QR} and Δe_{GC} at maximum gasket stress to be applied Q_{smax}						
P_{QR} at Q_{smax}	0.99	11	0.91	41	0.91	75
Q_{smax}	1150 MPa		600 MPa		1150 MPa	

P_{QR} over initial gasket stress grouped by temperature



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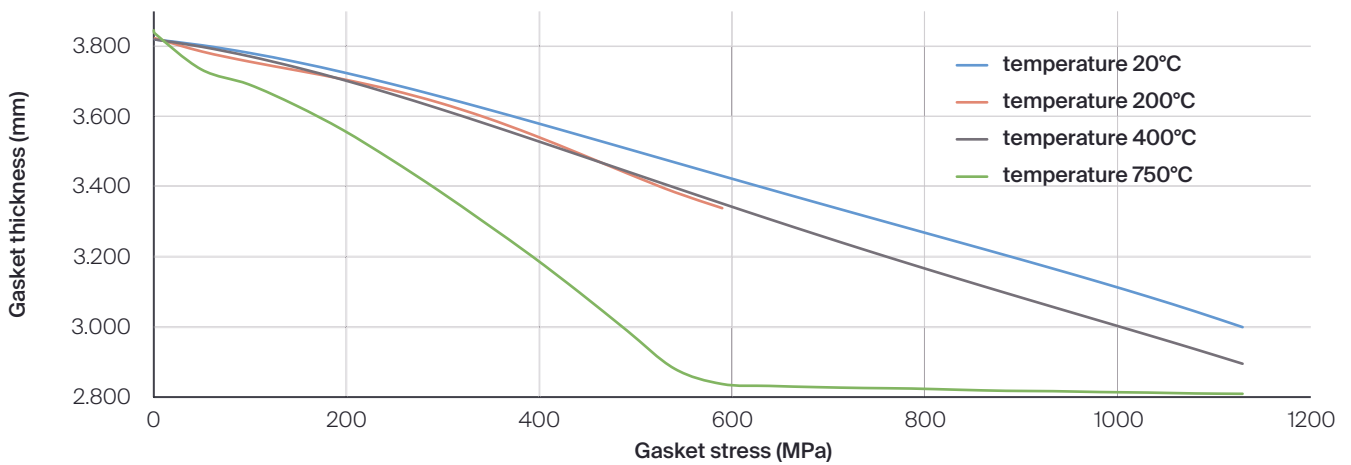
Modulus of Elasticity

Secant unloading modulus of the gasket E_g (MPa) and gasket thickness e_g (mm)								
Gasket Stress	Temperature 20°C		Temperature 200°C		Temperature 400°C		Temperature 750°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)
0	0	3.819	0	3.822	0	3.820	0	3.845
1	0	3.819	0	3.821	0	3.820	0	3.8365
50	62624	3.803	49826	3.783	43460	3.799	77088	3.734
100	91403	3.781	77985	3.755	64279	3.773	112692	3.6915
150	114526	3.755	98121	3.730	81621	3.741	133519	3.6315
200	133255	3.725	113043	3.704	96052	3.705	148296	3.561
250	148713	3.693	125004	3.674	108095	3.665	159758	3.4785
300	161889	3.658	135697	3.639	118228	3.624	169123	3.3905
350	173636	3.622	146256	3.596	126883	3.580	177042	3.297
400	184670	3.584	157258	3.546	134447	3.535	183901	3.201
450	195569	3.546	168720	3.492	141262	3.490	189951	3.098
500	206779	3.507	180099	3.437	147626	3.444	195363	2.99
550	218606	3.469	190296	3.383	153791	3.398	200258	2.882
600	231221	3.430	197651	3.338	159963	3.353	204728	2.8385
650	244659	3.392			166304	3.308		2.833
700	258818	3.354			172931	3.264		2.8295
750	273463	3.316			179916	3.221		2.827
800	288217	3.279			187284	3.179		2.8255
850	302572	3.241			195018	3.138		2.822
900	315882	3.204			203054	3.098		2.819
950	327363	3.166			211283	3.058		2.818
1000	336098	3.127			219551	3.018		2.8155
1050	341031	3.086			227659	2.978		2.814
1100		3.044			235364	2.938		2.8115
1150		2.999			242375	2.896		2.8105

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Modulus of Elasticity

Gasket thickness e_g (mm)



Secant unloading modulus of the gasket E_g (MPa)

