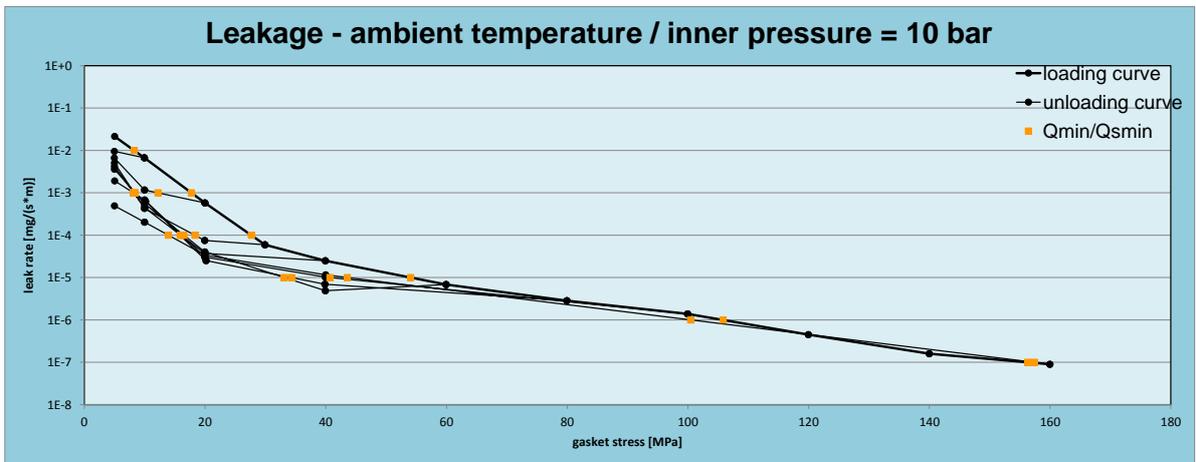
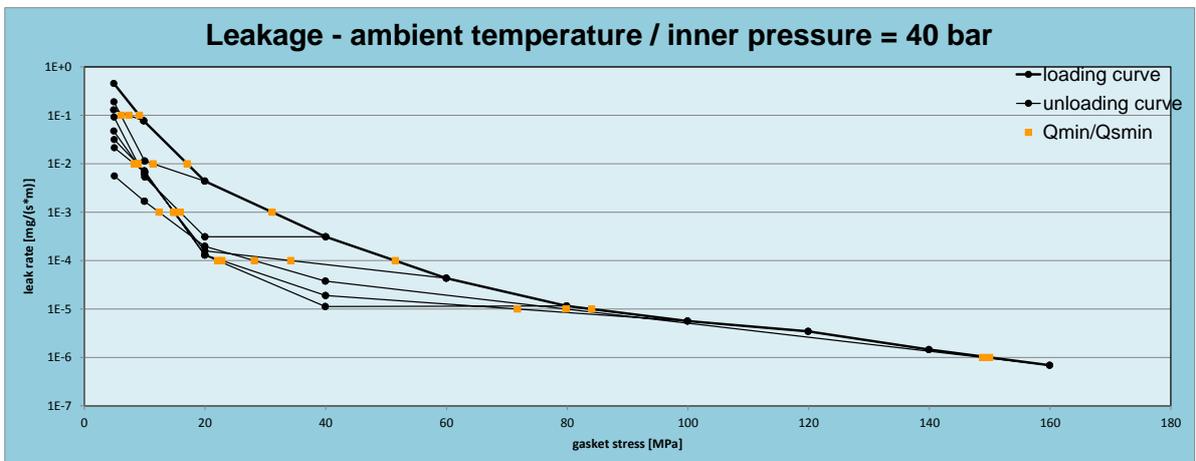


Company Address	IDT Industrie- und Dichtungstechnik GmbH Werk Kupferring, Gewerbering 6, 09456 Annaberg-Buchholz, Germany	According to <b>DIN EN 13555</b> <b>2021-04</b>
Gasket Type	IDT-Wellringdichtung mit Grafitauflagen; WS 1.4404/3803 IB; IDT-Profil WD20/0,15; LE-Safe	
Sealing element dimensions [mm]	49x92x3	

Minimum stress to seal $Q_{min/L}$ (at assembly), $Q_{Smin/L}$ (after off-loading) for $p = 10$ bar											
L [mg/(s*m)]	$Q_{min/L}$ [MPa]	$Q_{Smin/L}$ [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	$Q_A=100$ MPa	$Q_A=120$ MPa	$Q_A=140$ MPa	$Q_A=160$ MPa
$10^0$	5	5	5	5	5	5	5	5	5		5
$10^{-1}$	5	5	5	5	5	5	5	5	5		5
$10^{-2}$	8		5	5	5	5	5	5	5		5
$10^{-3}$	18		12	8	8	8	5	8			5
$10^{-4}$	28			18	16	16	16	16			14
$10^{-5}$	54					33	34	41			44
$10^{-6}$	106										100
$10^{-7}$	156										157
$10^{-8}$											

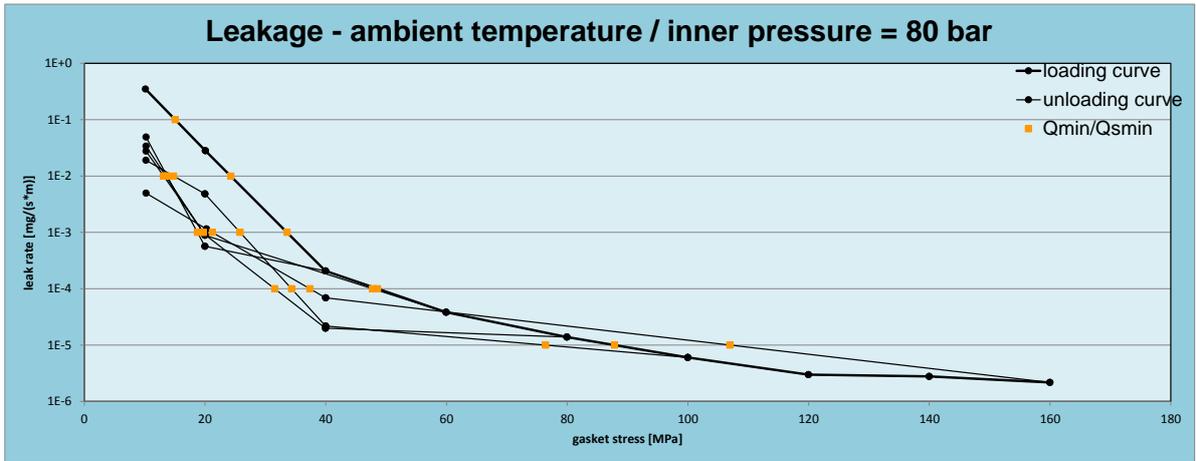


Minimum stress to seal $Q_{min/L}$ (at assembly), $Q_{Smin/L}$ (after off-loading) for $p = 40$ bar											
L [mg/(s*m)]	$Q_{min/L}$ [MPa]	$Q_{Smin/L}$ [MPa]									
		$Q_A=10$ MPa	$Q_A=20$ MPa	$Q_A=40$ MPa	$Q_A=60$ MPa	$Q_A=80$ MPa	$Q_A=100$ MPa	$Q_A=120$ MPa	$Q_A=140$ MPa	$Q_A=160$ MPa	
$10^0$	5	5	5	5	5	5	5	5	5		5
$10^{-1}$	9	7	6	5	5	5	5	5	5		5
$10^{-2}$	17		11	9	9	9	8				5
$10^{-3}$	31			16	15	15	15				12
$10^{-4}$	51				34	22	23				28
$10^{-5}$	84						72				80
$10^{-6}$	150										149
$10^{-7}$											
$10^{-8}$											

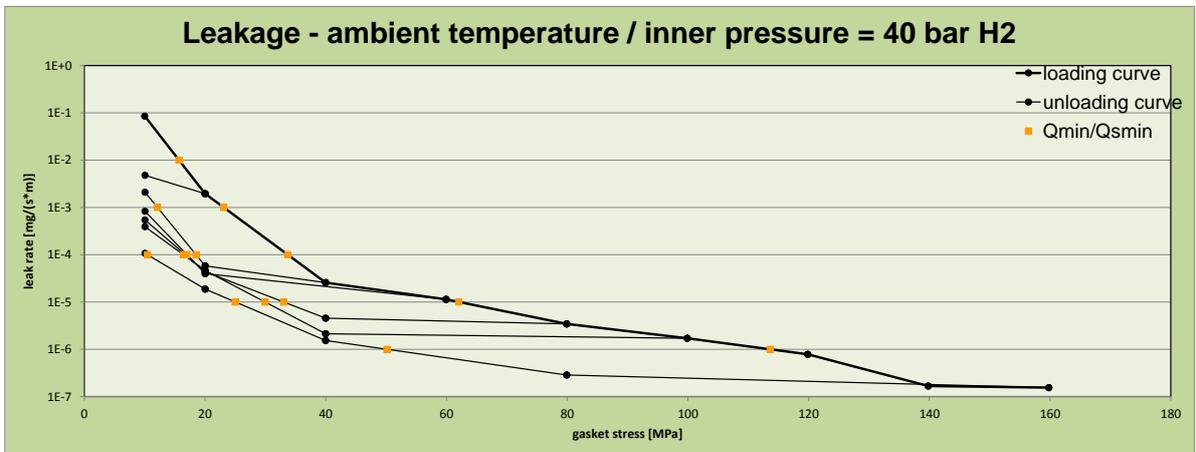


Company Address	IDT Industrie- und Dichtungstechnik GmbH Werk Kupferring, Gewerbering 6, 09456 Annaberg-Buchholz, Germany	According to <b>DIN EN 13555</b> 2021-04
Gasket Type	IDT-Wellringdichtung mit Grafitauflagen; WS 1.4404/3803 IB; IDT-Profil WD20/0,15; LE-Safe	
Sealing element dimensions [mm]	49x92x3	

Minimum stress to seal $Q_{min/L}$ (at assembly), $Q_{Smin/L}$ (after off-loading) for $p = 80$ bar											
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	$Q_A=100$ MPa	$Q_A=120$ MPa	$Q_A=140$ MPa	$Q_A=160$ MPa		
$10^0$	10	10	10	10	10	10			10		
$10^{-1}$	15		10	10	10	10			10		
$10^{-2}$	24		14	13	13	15			10		
$10^{-3}$	34		19	20	20	26			21		
$10^{-4}$	49			48	32	34			37		
$10^{-5}$	88					76			107		
$10^{-6}$											
$10^{-7}$											
$10^{-8}$											



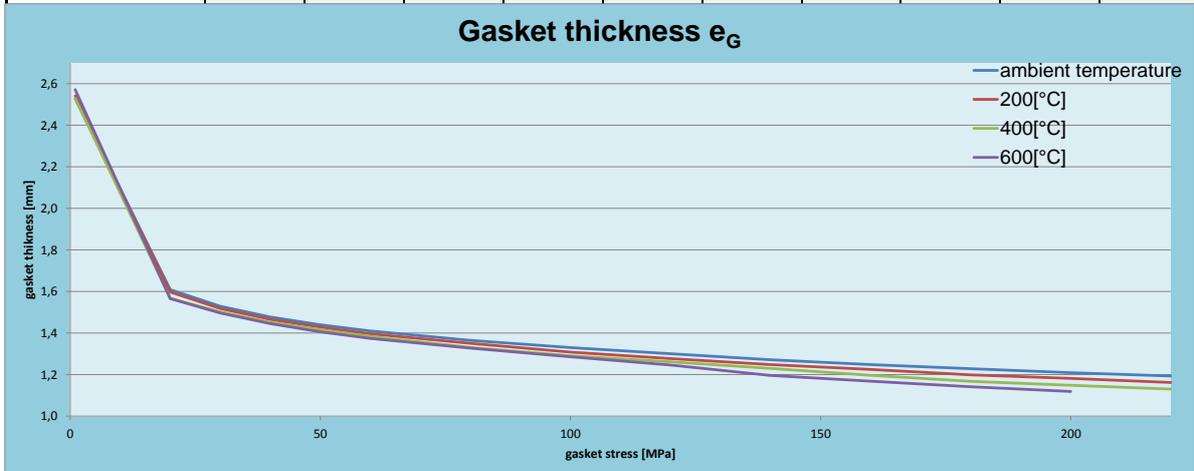
Minimum stress to seal $Q_{min/L}$ (at assembly), $Q_{Smin/L}$ (after off-loading) for $p = 40$ bar H2											
L [mg/(s*m)]	$Q_{min/L}$ [MPa]	$Q_{Smin/L}$ [MPa]									
		$Q_A=20$ MPa	$Q_A=40$ MPa	$Q_A=60$ MPa	$Q_A=80$ MPa	$Q_A=100$ MPa	$Q_A=120$ MPa	$Q_A=140$ MPa	$Q_A=160$ MPa		
$10^0$	10	10	10	10	10	10			10		
$10^{-1}$	10	10	10	10	10	10			10		
$10^{-2}$	16	10	10	10	10	10			10		
$10^{-3}$	23		12	10	10	10			10		
$10^{-4}$	34		19	17	17	16			10		
$10^{-5}$	62				33	30			25		
$10^{-6}$	114								50		
$10^{-7}$											
$10^{-8}$											



Company Address	IDT Industrie- und Dichtungstechnik GmbH Werk Kupferring, Gewerbering 6, 09456 Annaberg-Buchholz, Germany	According to <b>DIN EN 13555</b> <b>2021-04</b>
Gasket Type	IDT-Wellringdichtung mit Grafitauflagen; WS 1.4404/3803 IB; IDT-Profil WD20/0,15; LE-Safe	
Sealing element dimensions [mm]	49x92x3	

Relaxation ratio $P_{QR}$ for stiffness $C = 500$ kN/mm										
Gasket stress	ambient temperature		temperature 1 [200 °C]		temperature 2 [400 °C]		temperature 3 [600 °C]		$P_{QR}$	$\Delta e_{Gc}$ [mm]
	$P_{QR}$	$\Delta e_{Gc}$ [mm]	$P_{QR}$	$\Delta e_{Gc}$ [mm]	$P_{QR}$	$\Delta e_{Gc}$ [mm]	$P_{QR}$	$\Delta e_{Gc}$ [mm]		
Stress level 1 [20 MPa]							0.87	0.022		
Stress level 2 [30 MPa]	1.00	0.002	0.97	0.011	0.91	0.026				
Stress level 3 [40 MPa]							0.95	0.017		
Stress level 4 [50 MPa]	1.00	0.002	0.98	0.010	0.98	0.010				
Stress level 5 [80 MPa]	1.00	0.001	0.99	0.009	0.99	0.009	0.97	0.019		
$P_{QR}$ and $\Delta e_{Gc}$ at maximal applicable gasket stress $Q_{Smax}$										
$P_{QR}$ at $Q_{Smax}$	1.00	0.003	1.00	0.006	0.99	0.013	0.98	0.020		
$Q_{Smax}$	200 MPa		150 MPa		120 MPa		100 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 [600 °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		2.655		2.605		2.635		2.680			
1		2.529		2.542		2.530		2.572			
20	1205	1.609	2407	1.597	2872	1.567	2641	1.565			
30	1546	1.529	2608	1.518	2217	1.501	3101	1.496			
40	3032	1.477	3011	1.465	3373	1.452	3817	1.445			
50	3348	1.439	3496	1.428	3964	1.416	4159	1.406			
60	3770	1.410	3679	1.397	4012	1.383	3610	1.374			
80	6272	1.364	5164	1.350	5180	1.331	5107	1.327			
100	7398	1.330	4726	1.308	5396	1.290	4792	1.286			
120	8254	1.300	6055	1.277	7159	1.262					
140	6172	1.271	5583	1.248							
160	5917	1.248	5535	1.225							
180	6689	1.228									
200	6944	1.209									
220											
240											
260											
280											
300											
320											
340											
360											
380											
400											
420											
440											
460											
480											
500											
940											



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