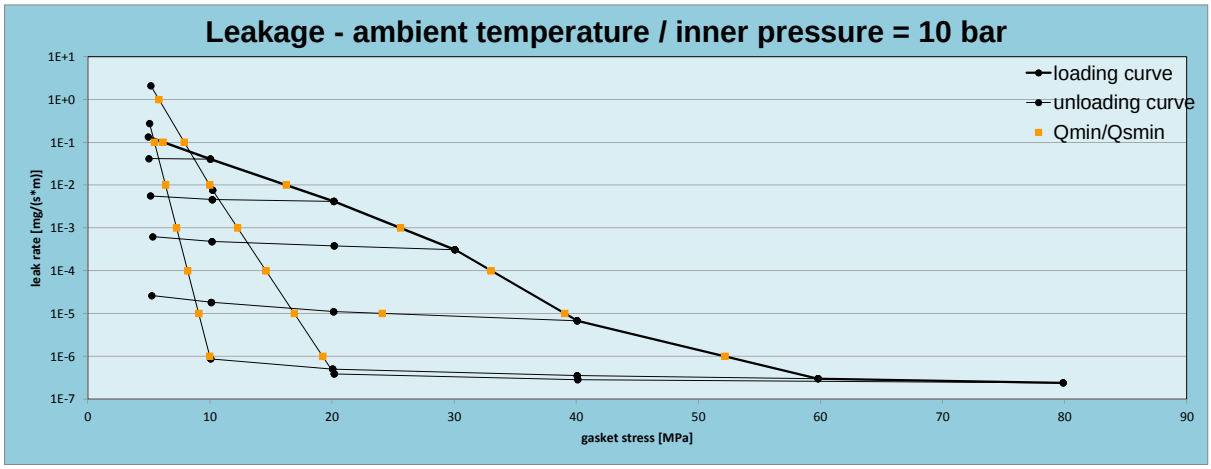
Company Address	*IDT Industrie- und Dichtungstechnik GmbH Werk Kupferring, Gewerbering 6, 09456 Annaberg-Buchholz, Germany*	According to **DIN EN 13555 2014-07**
Gasket Type	*IDT – Kammprofildichtung mit PTFE-Auflage; WS 1.4571/7739; IDT-Profile KD10, KD20 und KD30*	
Sealing element dimensions [mm]	*53x69x92x4.7*	

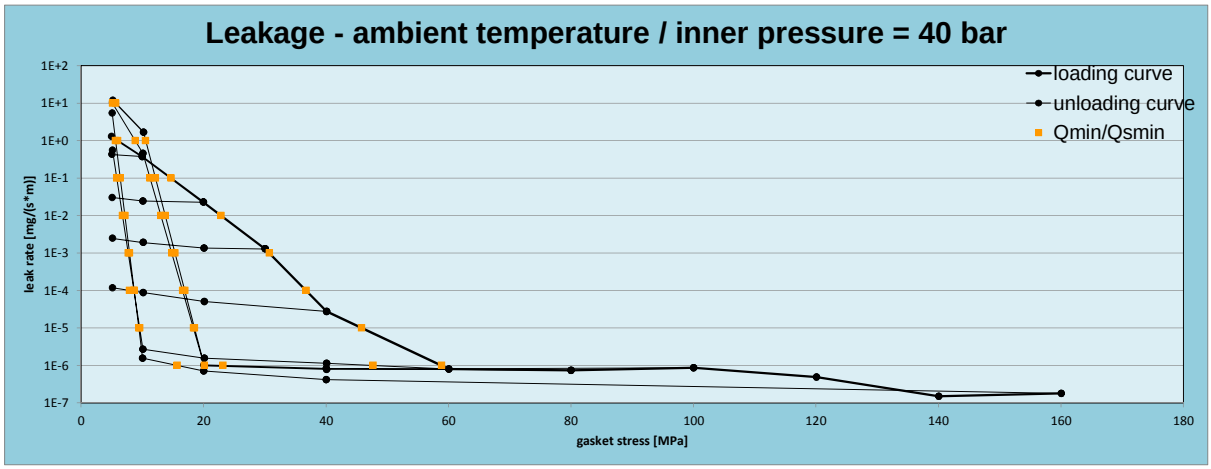
Minimum stress to seal $Q_{min/L}$ (at assembly), $Q_{Smin/L}$ (after off-loading) for p = 10 bar

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				
10^{-0}					5	5	6				
10^{-1}	6				5	5	8				
10^{-2}	16				5	6	10				
10^{-3}	26				5	7	12				
10^{-4}	33				5	8	15				
10^{-5}	39				24	9	17				
10^{-6}	52					10	19				
10^{-7}											
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= 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}	6				5	5	9	11			6
10^{-1}	15				5	6	11	12			6
10^{-2}	23				5	7	13	14			7
10^{-3}	31				5	8	15	15			8
10^{-4}	37				8	9	17	17			9
10^{-5}	46					10	18	19			9
10^{-6}	59					48	23	20			16
10^{-7}											
10^{-8}											



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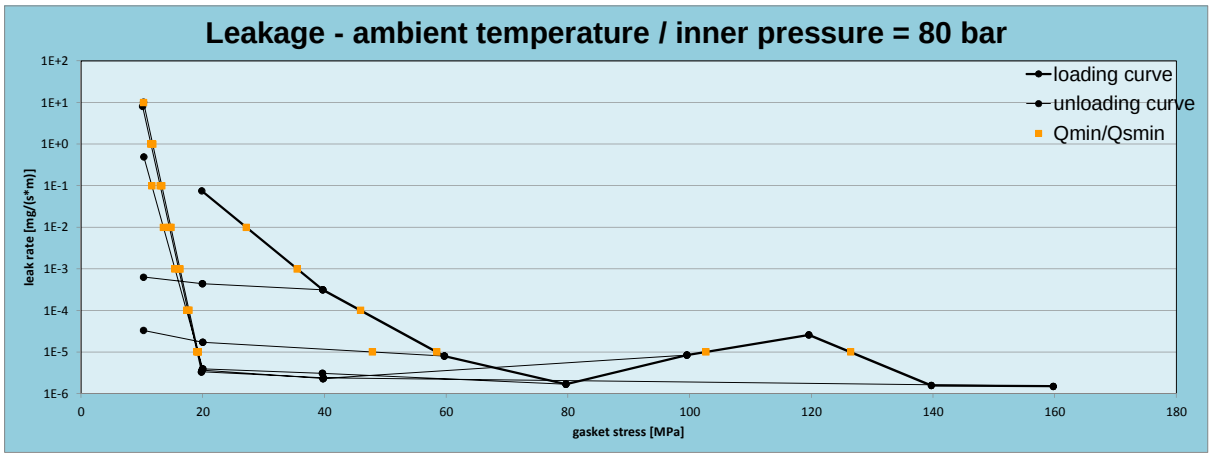
Company Address	*IDT Industrie- und Dichtungstechnik GmbH Werk Kupferring, Gewerbering 6, 09456 Annaberg-Buchholz, Germany*	According to **DIN EN 13555 2014-07**
Gasket Type	*IDT – Kammprofildichtung mit PTFE-Auflage; WS 1.4571/7739; IDT-Profile KD10, KD20 und KD30*	
Sealing element dimensions [mm]	*53x69x92x4.7*	

L [mg/(s*m)]	$Q_{min/L}$ [MPa]	Minimum stress to seal $\mathbf{Q_{min/L}}$ (at assembly), $\mathbf{Q_{Smin/L}}$ (after off-loading) for p = 80 bar $Q_{Smin/L}$ [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}			20	20	12			12			
10^{-1}			20	12	13			13			
10^{-2}	27		20	14	15			15			
10^{-3}	35		20	15	16			16			
10^{-4}	46		20	17	18			18			
10^{-5}	58		48	19	10			19			
10^{-6}											
10^{-7}											
10^{-8}											



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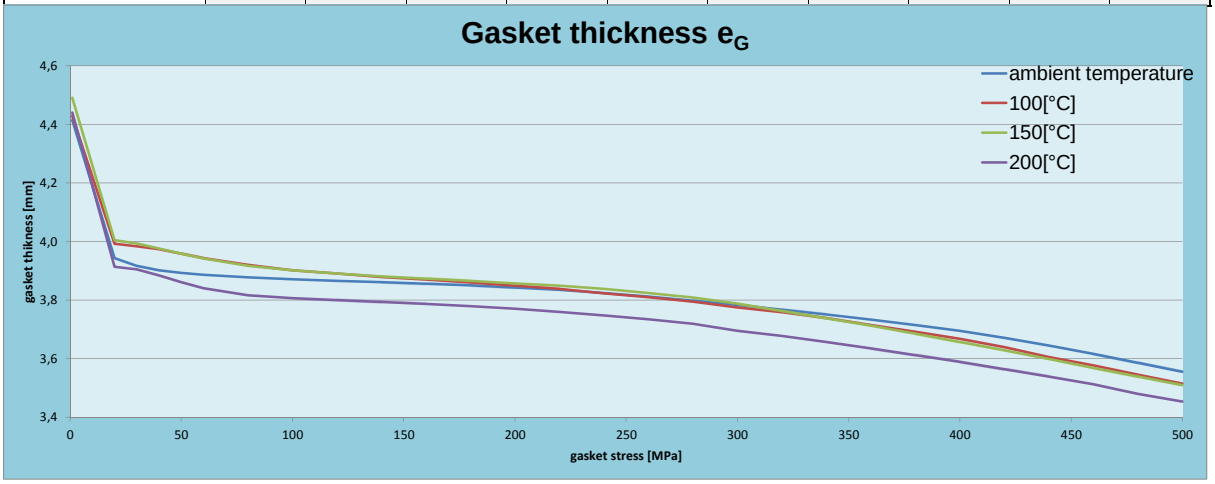
Sealing element dimensions [mm]	*53x69x92x4.7*	

Relaxation ratio P_{QR} for stiffness **C** = 500 kN/mm

Gasket stress	ambient temperature		temperature 1 [100 °C]		temperature 2 [150 °C]		temperature 3 [200 °C]			
	P_{QR}	Δe_{Gc} [mm]	P_{QR}	Δe_{Gc} [mm]	P_{QR}	Δe_{Gc} [mm]	P_{QR}	Δe_{Gc} [mm]	P_{QR}	Δe_{Gc} [mm]
Stress level 1 [30 MPa]	0.90	0.009	0.74	0.023	0.73	0.022	0.69	0.026		
Stress level 2 [50 MPa]	0.97	0.005	0.90	0.016	0.71	0.045	0.75	0.038		
Stress level 3 [100 MPa]	0.99	0.003	0.83	0.054	0.75	0.079	0.79	0.065		
P_{QR} and Δe_{Gc} at maximal applicable gasket stress Q_{smax}										
P_{QR} at Q_{Smax}	0.99	0.016	0.96	0.065	0.95	0.076	0.94	0.089		
Q_{Smax}	500 MPa		500 MPa		500 MPa		500 MPa			

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 [150 °C]		temperature 3 [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		4.580		4.605		4.630		4.620		
1		4.414		4.429		4.490		4.440		
20	6738	3.943	46	3.992	-34530	4.004	291303	3.914		
30	10111	3.916	-21873	3.984	156127	3.993	4317	3.904		
40	13300	3.902	53107	3.973	77265	3.976	-4097	3.884		
50	16426	3.893	33069	3.959	78376	3.958	-52818	3.861		
60	19335	3.886	58379	3.943	64885	3.942	46578	3.840		
80	26942	3.878	44489	3.920	116182	3.917	28031	3.817		
100	32653	3.871	33158	3.901	64413	3.901	31622	3.807		
120	37520	3.866	130399	3.890	53134	3.890	36006	3.800		
140	39235	3.861	59258	3.879	48571	3.881	36367	3.793		
160	42465	3.856	52207	3.870	47509	3.873	41403	3.787		
180	44304	3.850	52682	3.861	52437	3.866	40073	3.779		
200	46821	3.843	41424	3.850	52701	3.857	35013	3.770		
220	51145	3.835	40665	3.838	58319	3.849	32294	3.760		
240	53202	3.824	33288	3.823	59323	3.838	37242	3.748		
260	54353	3.812	34042	3.810	58121	3.824	39285	3.734		
280	55605	3.798	45554	3.795	*60007*	3.808	56489	3.719		
300	57342	3.783	55429	3.775	61959	3.787	40337	3.695		
320	62042	3.768	63539	3.759	65330	3.763	57630	3.677		
340	63683	3.751	137110	3.738	68270	3.738	91519	3.657		
360	67617	3.734	84971	3.715	69372	3.712	73503	3.635		
380	71834	3.715	74977	3.692	70020	3.685	70958	3.612		
400	74970	3.695	101635	3.668	73604	3.656	102969	3.589		
420	77312	3.672	80065	3.639	80324	3.629	121339	3.564		
440	78635	3.645	75541	3.605	79733	3.599	120489	3.539		
460	80350	3.616	116165	3.577	83554	3.569	696814	3.512		
480	81385	3.585	115104	3.546	87446	3.539	113244	3.479		
500	87489	3.555	89140	3.514	94244	3.509	199541	3.454		
940										



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