

Company Address	IDT Industrie- und Dichtungstechnik GmbH IDT Werk Kupferring, Postfach 100 152, D-09441 Annaberg-Buchholz
Gasket Type	IDT-Wellringdichtung WS 1.4571/3800, WD10 Wellring 1.4571, Dicke 1,5 mm, Graphitauflage (SGL F08010C), Dicke 0,8 mm
Thickness e_{GO} [mm]	3,1 mm

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]							
		$Q_A = 20$ [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^{-1}	< 10	< 10	< 10	< 10					
10^{-2}	13	< 10	< 10	< 10					
10^{-3}	18	13	< 10	< 10					
10^{-4}	30		20	18					
10^{-5}									
10^{-6}									
10^{-7}									
10^{-8}									

Relaxation ratio P_{QR} for stiffness $C = 500$ kN/mm			
Gasket stress [MPa]	ambient temperature	temperature 1 [150 °C]	temperature 2 [300 °C]
Stress level 1 [30 MPa]	0,96	0,82	0,72
Stress level 2 [50 MPa]	0,97	0,89	0,84
Q_{Smax} [200 MPa]	1,00	0,99	0,97

Maximal applicable gasket stress Q_{Smax}		
Q_{Smax} [MPa] – ambient temperature	Q_{Smax} [MPa] – temperature 1 [150 °C]	Q_{Smax} [MPa] – temperature 2 [300 °C]
>200	>200	>200

Sekant unloading modulus of the gasket E_G [MPa]			
Gasket stress [MPa]	ambient temperature	temperature 1 [150 °C]	temperature 2 [300 °C]
20	915	1054	1260
30	1336	1587	1509
40	1661	2041	2255
50	1861	1830	2439
60	2177	2700	2672
80	2102	2697	2740
100	2439	2662	3140
120	2636	2889	3717
140	2765	3043	3542
160	2700	3065	3763
180	2837	2834	4199
200	2726	2938	3987
220	2567	2915	3478
240	2535	2931	3715

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

Creation date of this sheet: 22.10.2008