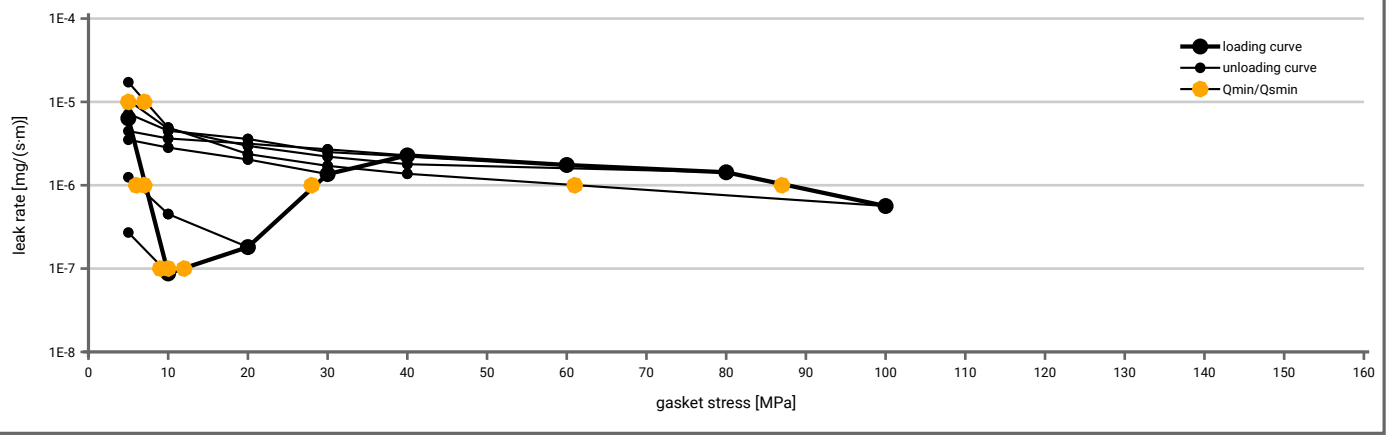
Manufacturer address	KLINGER Kempchen GmbH, Im Waldteich 21, 46147 Oberhausen, DE	According to **DIN EN 13555 2005-2**
Product name	Profile gasket PW21 (1.4541; TFM1600; s=0,75mm)	
Product dimensions	92 x 49 x 3.5 mm (DIN EN 1514-3 1997-8)	

Minimum stress to seal $Q_{min(L)}$ (at assembly), $Q_{smin(L)}$ (after off-loading) for p = 10 bar (T = 23 ± 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 = 30 [MPa]	Q_A = 40 [MPa]	Q_A = 60 [MPa]	Q_A = 80 [MPa]	Q_A = 100 [MPa]
1E-0	5		5	5	5	5	5	5	5
1E-1	5		5	5	5	5	5	5	5
1E-2	5		5	5	5	5	5	5	5
1E-3	5		5	5	5	5	5	5	5
1E-4	5		5	5	5	5	5	5	5
1E-5	5		5	5	5	5	5	5	7
1E-6	7		5	6					62
1E-7	10		10						
1E-8									

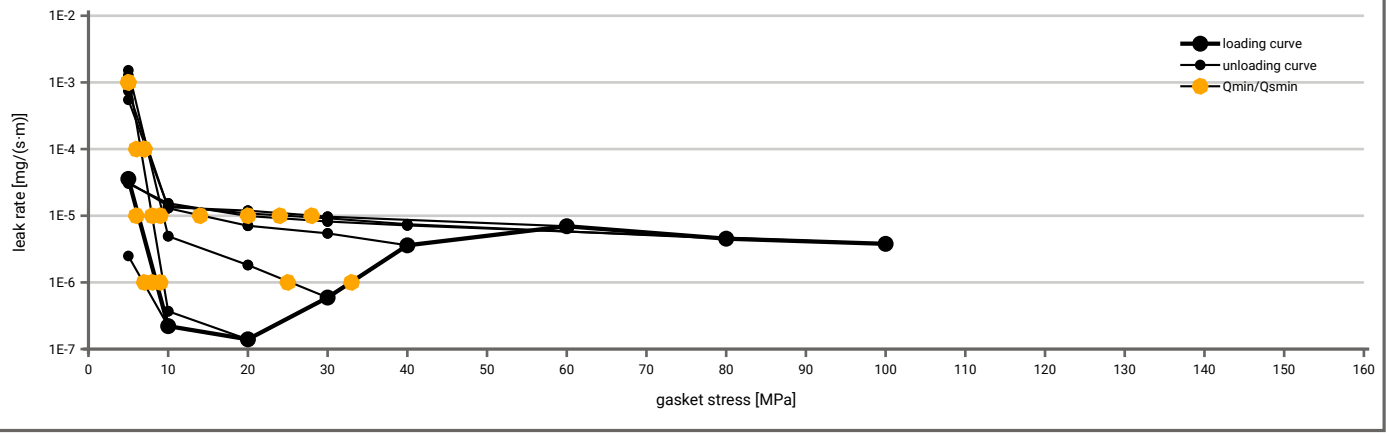
Leakage - 23 ± 2 °C / 10 bar



Minimum stress to seal $Q_{min(L)}$ (at assembly), $Q_{smin(L)}$ (after off-loading) for p = 40 bar (T = 23 ± 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 = 30 [MPa]	Q_A = 40 [MPa]	Q_A = 60 [MPa]	Q_A = 80 [MPa]	Q_A = 100 [MPa]
1E-0	5		5	5	5	5	5	5	5
1E-1	5		5	5	5	5	5	5	5
1E-2	5		5	5	5	5	5	5	5
1E-3	5		5	5	6	5	5	5	5
1E-4	5		5	7	8	8	7	5	5
1E-5	6		5	8	10	14	29	25	20
1E-6	9		7	10	26				
1E-7									

Leakage - 23 ± 2 °C / 40 bar



Note: the content of darkened cells was not determined respectively is unnecessary	Rev.-No.: **2**	Creation date of this sheet: **2025-06-13**

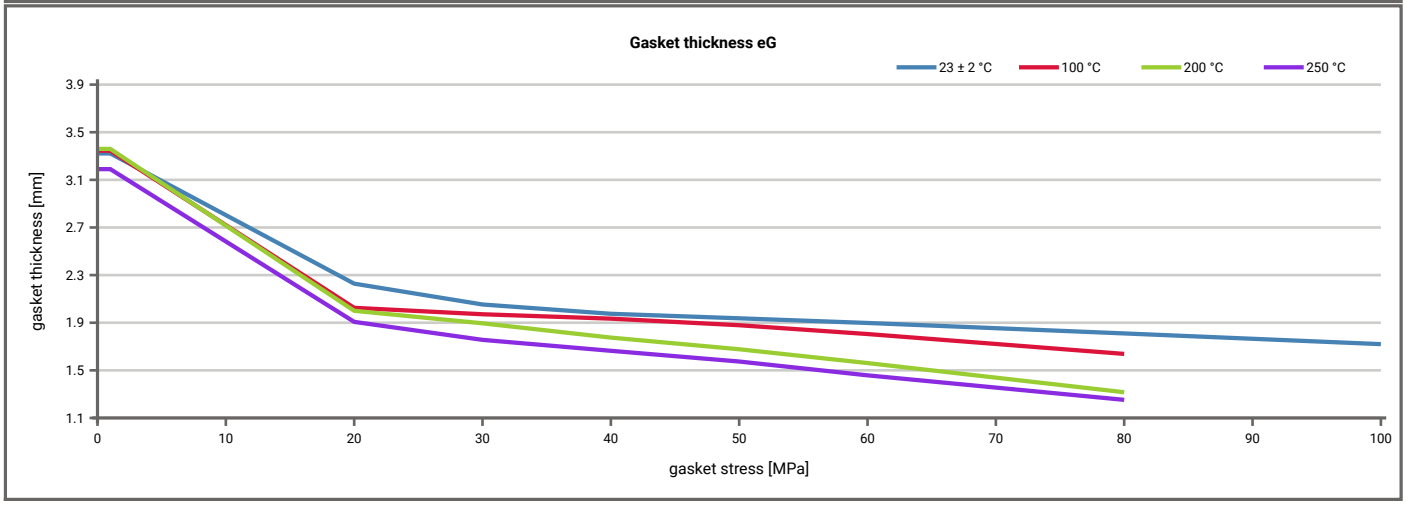
Manufacturer address	KLINGER Kempchen GmbH, Im Waldteich 21, 46147 Oberhausen, DE	According to **DIN EN 13555 2005-2**
Product name	Profile gasket PW21 (1.4541; TFM1600; s=0,75mm)	
Product dimensions	92 x 49 x 3.5 mm (DIN EN 1514-3 1997-8)	

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

Gasket stress	23 ± 2 °C		Temperature 1 [100 °C]		Temperature 2 [200 °C]		Temperature 3 [250 °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]	0.90	26	0.82	47	0.75	64	0.65	89		
Stress level 2 [50 MPa]	1.00	0	0.92	34	0.95	23	0.51	208		
P_{QR} and Δe_{Gc} at maximum gasket stress to be applied (Q_{smax})										
P_{QR} at Q_{smax}	0.95	46	0.83	117	0.59	275	0.53	316		
Q_{smax}	100 MPa		80 MPa		80 MPa		80 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]		Temperature 3 [250 °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	3.322	0	3.345	0	3.360	0	3.190		
1	0	3.322	0	3.345	0	3.360	0	3.190		
20	503	2.228	514	2.025	864	2.000	636	1.907		
30	883	2.053	1152	1.971	995	1.895	1021	1.756		
40	1328	1.975	2056	1.934	1206	1.775	1099	1.664		
50	2692	1.937	1890	1.879	1629	1.677	1350	1.574		
60	2431	1.898	2402	1.805	1566	1.561	1797	1.458		
80	3531	1.810	2723	1.638	3252	1.316	2340	1.252		
100	4701	1.720								



Note: the content of darkened cells was not determined respectively is unnecessary	Rev.-No.: **2**	Creation date of this sheet: **2025-06-13**