Packing Overview, Clearances and Tolerances

Type	Mechanical Properties: Maximum Pressure [bar]	Maximum Speed [m/s] rotating	Maximum Speed [m/s] oscillating	Temperature Resistance [°C] from	Temperature Resistance [°C] to	Drinking water, foodstuffs	Water, Sewage, Boiler Feed Water	Gasses, Air, Nitrogen	Diluted Acids, inorg./org., Saline Solutions	Concentrated acid	Diluted lyes / alkalies	Concentrated ayes / alkalies	Oils, greases	Heat transfer mediums	Solvents	organic compounds	Adhesives, Bitumen	abrasive mediums	Colors, varnishes	page
K80S	1500	0,2	2	-200	+550	●	●	●	❍	❍	❍	❍	●	●	●	●	●	●	●	177
K100	500	5	2	-200	+550	●	●	●	❍	❍	●	❍	●	●	●	●	●	❍	●	181
K80	300	5	2	-200	+550	●	●	●	●	❍	●	●	●	●	●	●	❍	❍	●	176
K68	2	-	-	-200	+550	X	X	❍	X	X	X	X	❍	❍	❍	❍	❍	❍	❍	175
K80S TA-HT*	1500	5	2	-200	+550	●	●	●	❍	❍	❍	❍	●	●	●	●	❍	❍	●	183
K95	300	30	10	-200	+450	●	●	●	●	❍	●	●	●	●	●	●	❍	❍	●	180
K450G	20	-	-	-40	+450	X	❍	❍	❍	X	❍	X	●	❍	●	●	❍	❍	X	181
K80C	300	5	2	-200	+280	●	●	●	●	●	●	●	●	●	●	●	●	❍	●	177
K91	200	20	3	-200	+280	❍	●	●	●	X	●	X	●	●	●	●	●	❍	●	180
K90	200	10	10	-200	+280	❍	●	●	❍	X	❍	X	●	●	●	●	●	●	X	179
K36	200	0,5	2	-200	+280	❍	●	●	●	●	●	●	●	●	●	●	●	X	●	174
K75	200	8	6	-200	+260	X	●	●	●	X	●	X	●	●	●	●	●	X	●	176
K81	100	20	3	-100	+280	X	●	●	●	X	●	X	●	●	●	●	●	●	X	178
K89	50	15	15	-100	+280	❍	●	●	❍	X	❍	X	●	●	●	●	●	●	X	179
K40	30	20	5	-100	+280	❍	●	●	●	❍	●	❍	●	●	❍	❍	X	X	X	174
K83	100	15	2	-100	+250	X	●	●	●	X	●	X	●	●	●	●	●	●	X	178
K41	60	10	4	-20	+120	❍	●	●	❍	X	❍	X	●	X	❍	❍	X	❍	X	175

● = applicable, ❍ = conditionally applicable, X = not applicable

Size of the Gap between Spindle, Gland Packing and Housing

If we designate the outer diameter of the spindle as d_1 and the interior diameter of the gland or of the bottom ring as d_2, then $t = (d_2 - d_1)/2$ is valid for the median radial gap between the spindle and the spacer or the bottom ring. In the case of an off-center position of the spindle or rod, the gap can double to one side to $2t = d_2 - d_1$.

The table shows reference values for the maximum permitted size of the gap *t* in reference to the packing material. The influence of the operating pressure to be sealed was taken into account in this respect, as generally the smaller packing widths are inserted for the higher pressures.

Tolerances and the Composition of the Surface Area

For the rod or spindle, the accuraey degree should be h9. The surface area roughness should be $R_z \leq$ 2.5 µm or alternatively $R_a \leq$ 0.6 µm

For the gland, the tolerance accuraey degree D10 was proven. The surface area roughness should be $R_z \leq$ 6.3 µm or alternatively $R_a \leq$ 2.5 µm.

Permitted radial Gap *t* in mm between Spindle and Gland or Housing

Nominal width of packing in mm	packing K36,K75 K80C, K95C	packing K80, K95	packing K80S, K100
3	0,08	0,20	0,35
4	0,10	0,22	0,40
5	0,10	0,24	0,45
6	0,12	0,28	0,50
8	0,12	0,32	0,55
10	0,14	0,36	0,60
12	0,14	0,40	0,65
15	0,16	0,45	0,70
20	0,16	0,50	0,75
25	0,18	0,55	0,80

* For the packing set K80S TA-HT other tolerances and Oberfächenangaben apply. See page 183.