

BLOW-OUT PROOF TA-LUFT K80S TA-HT PACKING UNIT

TA-Luft demands the "use of high-quality gaskets". This high level of quality for flanges and fittings is defined in the VDI 2440 "Emissions Reduction in Petrol Refineries" Directive. Alongside high-quality seals for control and shut-off devices such as metal bellows with a down-stream safety stuffing box, sealing systems such as the TA-Luft K80S TA-HT Packing can be used.

The first criterion for the equivalence is that the design layout of the sealing system permanently produces the intended function under operating conditions.

The packing unit is characterised, among other things, by an extremely low friction coefficient so that the lifting power is correspondingly low. A spring assembly with disk springs is not necessary in order to meet the TA-Luft leakage rate criterion of VDI Directive 2440 10^{-2} [mbar·l·s⁻¹·m⁻¹]. The containment rings reliably prevent the extrusion of the sealing rings. Consequently, a sudden failure of the sealing unit is prevented.

The K80S TA-HT Packing Unit is blow-out proof. The blow-out resistance was tested and verified at MPA Stuttgart with 400 °C supercritical steam at 300 bar.

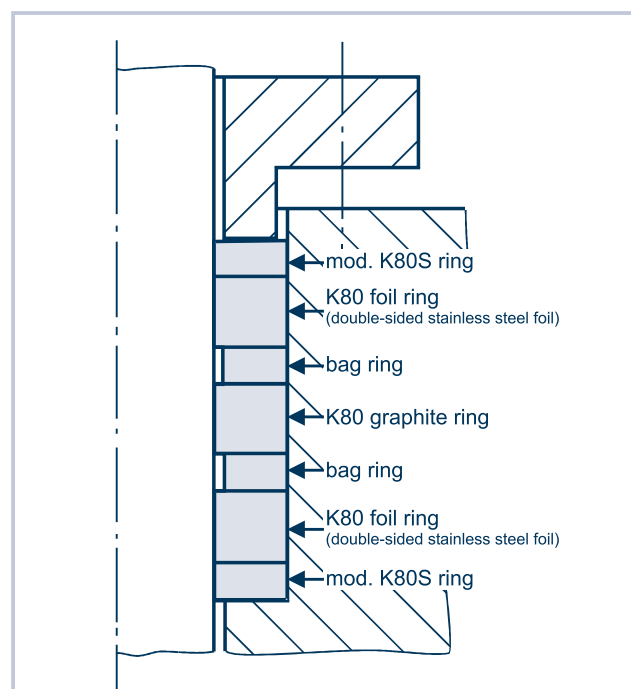


Secondly, the specific leakage rates must meet the following limits:

- » 10^{-4} mbar·l/(s·m) at sealing system temperatures below 250 °C or 10^{-2} mbar·l/(s·m) at sealing system temperatures greater than or equal to 250 °C.

The requirements placed upon these sealing systems are as varied as the applications, meaning that selection is performed according to prescribed criteria. In doing so, the application parameters such as temperature, pressure, medium, type of movement and maximum applicable lifting force as well as the number of expected lifts during the entire period of operation must be taken into account.

K80S TA-HT is a packing unit with a total of seven rings. They partly consist of rings manufactured from graphite with stainless steel sheet inserts and partly consist of rings manufactured using flexible graphite as well as stainless steel foils located in between. The K80S TA-HT was classified as high-quality packing within the meaning of the TA-Luft for temperature ranges greater than or equal to 250 °C by the MPA in Stuttgart with certificate no. 0005/2012.



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Mechanical properties:

Maximum temperature on the packing: (the medium temperature can be substantially higher)	550 °C
Pressure:	up to 1500 bar
Oscillating movement	2 m/s
Rotating movement	5 m/s
Extremely low friction between spindle and packing:	$\mu < 0,05$
Diameter (other dimensions are possible):	6/12 mm up to 340/360 mm

Media resistance

Abrasive media	○
Paints, carnishes	●
Gasses, air, nitrogen	●
Adhesives, bitumen	○
Concentrated alkalies	○
Diluted lyes/alkalies	○
Solvents	●
Oils, greases	●
Organic compounds	●
Concentrated acids	○
Diluted acids, inorg./org. saline solutions	○
Drinking water, foodstuffs	●
Heat transfer media	●
Water, waste water, boiler feed water	●

● = applicable ○ = conditionally applicable

For the rod or spindle, the tolerance range applies h7. The roughness should be $\leq 0,3 \mu\text{m Ra}$. For the stuffing box, the tolerance range H8 applies. The roughness should be $\leq 1 \mu\text{m Ra}$.

