



## KF glass components

Allectra offers KF components, completely made out of **Borosilicate** glass 3.3 ("Pyrex", "Duran") or **Quartz**.

	Borosilicate	Quartz
Max. useable temperature	500°C	1000°C
Max. temperature at flange	Limited by seal / chain clamp Typical 120°C continuous, up to 200°C short (1h)	
Expansion coefficient	$3.3 \cdot 10^{-6} / K$	$0.54 \cdot 10^{-6} / K$
Thermal conductance	1.2W/m K	1.38W/m K
Softening Temperature	825°C	>1600°C
Temperature shock resistivity	Typ. 100K	>200K

All our KF flanges are made according the ISO standard sizes. So the thickness of the gaskets as well as the size of the chain clamps is standard as well.

So the required sizes for glass-to-glass, glass-to-metal and metal-to-metal flanges are always the same.

For avoiding damage on the glass, polymer chain clamps must be used. For the centring rings polymer centring rings are recommended as well.

As glass blank flanges have no groove for the centring ring, either single sided centring rings or outer centred centring rings must be used.



*Doomed Glass Adapter*



*Gaskets with polymer centring rings*



*Polymer chain clamps*