



# VACUUM GLASS & QUARTZ COMPONENTS

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- KF, ISO K, CF Glass to Metal Adaptors ..... H 20

**Neyco provides glass components for ultra-pure processes. Glass is highly resistant to water and most chemicals and can be thoroughly cleaned and sterilized, which ensures that your processes are cleaner than with Stainless Steel or Aluminum.**



Several qualities are available according to the kind of component:

- Duran (standard or optical quality)
- Kodial
- Pyrex
- Quartz (standard or optical quality)

 **See Section A - Vacuum Guide** in this catalogue about technical properties of the different Glasses.

The transition from glass to metal is no longer a problem but simply a matter of connecting two flanges. Vacuum measuring devices can, for example, easily be connected to glass systems by means of metal flanges.

Blank flanges can be used as inspection glasses. Optical blank flanges (parallel  $\phi$ , level  $< 3\mu\text{m}$ ) are available. This allows measurements with IR, UV or visible light.

In metal systems, adapters made from glass can be used for electric insulation.

#### **Applications**

- CVD and PVD processes
- Plasma etching and cleaning processes
- UV, IR and laser measurement
- High frequency and microwave supported processes
- Physical / chemical experiments
- Inspection glasses, flow rate observation



**Properties**

- Antimagnetic
- Radiation resistant
- Suitable for cleanrooms
- Useable only with elastomer seals

**KF GLASS FLANGES**

The flange dimensions are identical to the KF flanges, with the exception of the side width on the outside diameter, which is 4 mm instead of 3 mm. The larger dimension makes the glass flanges stronger to prevent cracking when the chain is tightened. The (compressed) seal ring width is therefore only 2 mm. Connection to a standard KF flange is always possible with the aid of a wider seal (3 mm).

**ISO-TAPERED GLASS FLANGES**

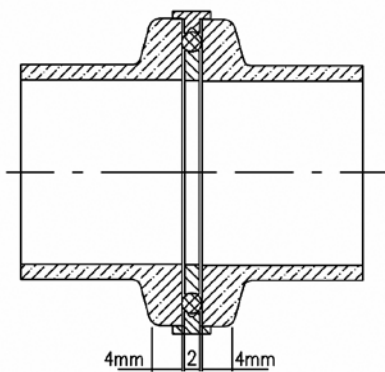
ISO-Tapered glass flanges can be directly mounted on ISO-Tapered metal flanges. DN 80 to 125 can be directly mounted on ISO F metal flanges (with plastic wall clamps).

**ELASTOMER SEALS FOR KF AND ISO-TAPERED GLASS FLANGES**

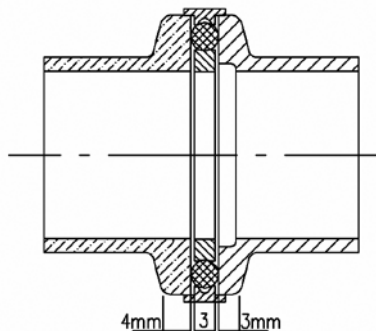
Two sealing widths are available: 2mm and 3mm. Since the glass flanges have a 1 mm thicker flange, the sealing width (compressed) is no longer 4 mm (for metal to metal connection) but 2 mm. For connections between a standard KF metal flange and a glass flange, a 3 mm wide seal is used.

The total width of two flanges and one seal is always 10 mm:

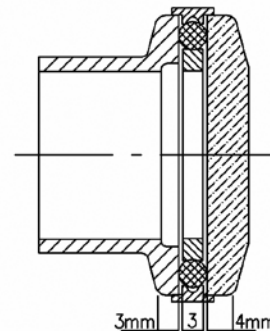
- $4+2+4=10$  for glass to glass connections
- $4+3+3=10$  for glass to metal connections
- $3+4+3=10$  for metal to metal connections



**Glass to glass connection**



**Glass to metal connection**



**KF flange with glass blank flange**

**TEFLON BELLOWS**

**Properties**

- Flanges: Teflon GRP\* / Bellows: Teflon
- Temperature range: -50 ... +200°C
- Leak rate:  $< 1.10^{-6}$  mbar.l.s<sup>-1</sup>

**Advantages**

- High flexibility
- Excellent corrosion resistance
- Suitable for glass and metal systems
- GRP\* reinforced flanges
- Machined from one piece
- Electrical insulation
- Antimagnetic

**Applications**

- Compensation of axial, lateral or angular set-offs
- Prevention of vibration transfer
- Substitute for elastomer compensators
- Compensate thermal expansion

\* Glass-Reinforced Plastic (also called fiberglass)

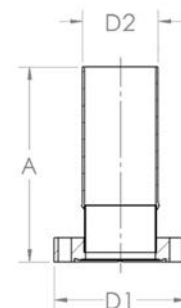
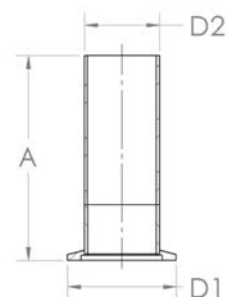
# KF, ISO K, CF Glass to Metal Adaptors

All components of this paragraph are available in **Kodial**, **Pyrex** (with P last digit on P/N) or **Quartz** (with Q last digit on P/N).

Specifications: Bakeable to 200°C at not greater than 2-3°C/min.

## TUBULATIONS - GLASS/STAINLESS STEEL

FLANGE	P/N	DN	GLASS	A	D1	D2
KF	KF16T13	16	Kodial	100	30	13
	KF25T19	25	Kodial	100	40	19
	KF25T25	25	Kodial	100	40	25
	KF40T25	40	Kodial	100	55	25
	KF40T38	40	Kodial	100	55	38
ISO K	ISO63T19	63	Kodial	100	95	19
	ISO63T38	63	Kodial	100	95	38
	ISO63T64*	63	Kodial	100	95	64
	ISO100T38	100	Kodial	100	130	38
	ISO100T64*	100	Kodial	100	130	64
	ISO100T100*	100	Kodial	150	130	100
	ISO160T64*	160	Kodial	100	180	64
	ISO160T100*	160	Kodial	150	180	100
	ISO160T150*	160	Kodial	150	180	150
CF	T6	16	Kodial	100	34	6
	T13	16	Kodial	100	34	13
	T19	40	Kodial	100	70	19
	T25	40	Kodial	100	70	25
	T38	40	Kodial	100	70	38
	T64*	63*	Kodial	100	114	64



\*Available only in Kodial or Pyrex

NOTE: Dimensions subject to raw material supplier tolerances.

All dimensions are in mm.

These connections are also available in double ended tubulations. Length on request.



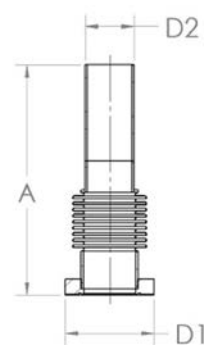
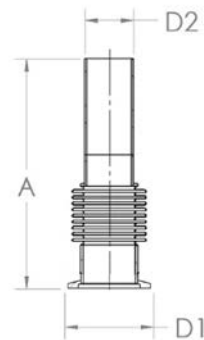
**KF double ended tubulation**



**CF double ended tubulation**

## TUBULATIONS WITH HYDROFORMED BELLOWS - GLASS / STAINLESS STEEL

FLANGE	P/N	DN	GLASS	A	D1	D2
KF	KF16T13B	16	Kodial	170	30	13
	KF25T19B	25	Kodial	190	40	19
	KF25T25B	25	Kodial	200	40	25
	KF40T25B	40	Kodial	200	55	25
	KF40T38B	40	Kodial	200	55	38
ISO K	ISO63T19B	63	Kodial	190	95	19
	ISO63T38B	63	Kodial	200	95	38
	ISO63T64B*	63	Kodial	260	95	64
	ISO100T38B	100	Kodial	200	130	38
	ISO100T64B*	100	Kodial	260	130	64
	ISO100T100B*	100	Kodial	280	130	100
CF	TB6	16	Kodial	170	34	6
	TB13	16	Kodial	170	34	13
	TB19	40	Kodial	190	70	19
	TB25	40	Kodial	200	70	25
	TB38	40	Kodial	200	70	38
	TB64*	63	Kodial	260	114	64



\*Available only in Kodial or Pyrex

NOTE: Dimensions subject to raw material supplier tolerances.

All dimensions are in mm.

These connections are also available in double ended tubulations. Length on request.



**KF double ended tubulation with bellows**



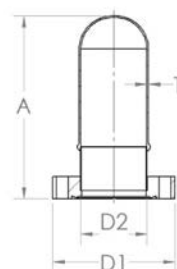
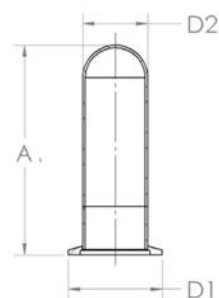
**CF double ended tubulation with bellows**

## DOMED TUBULATIONS - GLASS / STAINLESS STEEL

FLANGE	P/N	DN	A	D1	D2
KF	KF16DT13	16	100	30	13
	KF25DT25	25	100	40	25
	KF40DT38	40	100	55	38
ISO K	ISO63DT64*	63	150	95	64
	ISO100DT100*	100	150	130	100
	ISO160DT150*	160	200	180	150
CF	T13DT	16	100	34	13
	T38DT	40	100	70	38
	T64DT*	63	150	114	64

\*Available only in Kodial or Pyrex

NOTE: Dimensions subject to raw material supplier tolerances.



All dimensions are in mm.



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