



DuraBeryllium Window in Conflat Flange

Moxtek® offers DuraBeryllium® windows mounted in vacuum fittings (CF flanges) with a proprietary high temperature metal seal and both DuraCoat® and DuraCoat Plus protective films. DuraBeryllium windows have high x-ray transmission, high temperature tolerance, and excellent corrosion resistance.

For details about DuraBeryllium windows, please refer to the DuraBeryllium Windows datasheet (WIN-DATA-1003) at www.moxtek.com.

Applications

- X-ray Fluorescence
- Synchrotron
- X-ray Diffraction

Features	Benefits
DuraCoat®	Corrosion resistance, hermetic seal
DuraCoat® Plus	Maximum corrosion resistance
Thin Beryllium	High transmission of low energy x-rays
Uniform thickness	Consistent transmission
Vacuum tight	No gas diffusion
Standard stainless steel Conflat design	Fits standard vacuum fittings
	Corrosion resistant metal flange
Metal bond seal	Hermetic seal
	High temperature exposure

Geometry and Sizes

The geometry of the window frame is shown in Figure 2 and in Table 1. The typical assembly of the Beryllium window is shown in Figure 1.



Figure 1 Typical Assembly of Beryllium Window

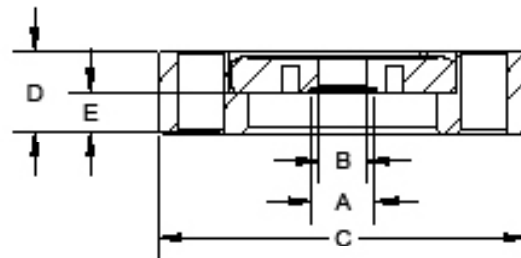


Figure 2 Conflat Flange Geometry

Table 1 Dimensions of Conflat Flange Options (Refer to Figure 2 above)

CF	Foil Thickness (µm)	Foil Diameter (mm) - A	Through Hole Diameter (mm) - B	CF Outer Diameter (mm) - C	CF Thickness (mm) - D	Window Height (mm) - E	Coating	Part ID
1-1/3" OD	8.0	9.2	7.0	33.8	7.2	0.5	DuraCoat Plus	DBM-08-9.2-CF1.3-P
	25.0	16.0	13.0	33.8	7.2	0.5	DuraCoat	DBM-25-16.0-CF1.3
2-1/8" OD	8.0	9.2	7.0	53.6	11.9	6.5	DuraCoat Plus	DBM-08-9.2-CF2.1-P
	25.0	16.0	13.0	53.6	11.9	6.5	DuraCoat	DBM-25-16.0-CF2.1



Mounting Instructions

Before mounting the CF flange, inspect the part and ensure that the flange is clean and free of scratches. When cleaning the flange, follow the Moxtek Technical Note, “Guidelines for Cleaning AP3 and DuraBeryllium X-ray Windows”. Do not touch the window with anything.

Use proper conflat flange bolt tightening protocol to avoid damage to the window. Improper handling and tightening of the flange can cause concentrated stress on the window and create a leak, voiding the warranty. Proper tightening protocol includes a crisscross method of securing each bolt as shown in Figure 4.

Conflat flanges are designed for use with a copper gasket. Only use the copper gasket one time. Only use proper size bolts when assembling. DuraBeryllium CF flanges can be used with standard CF adapters. A sample conflat flange attachment is shown in Figure 3 below.

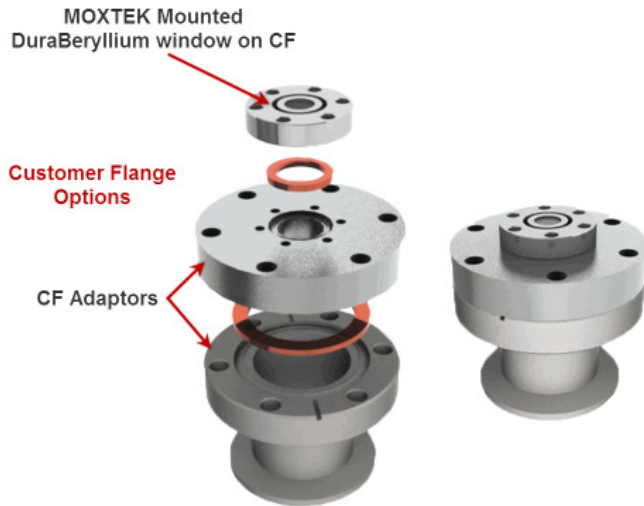


Figure 3 Moxtek Conflat Flange in Vacuum Assembly

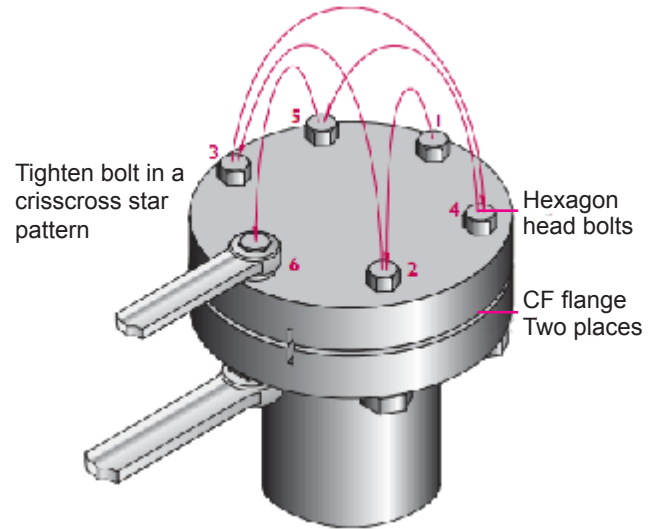


Figure 4 Conflat Flange Tightening Pattern*

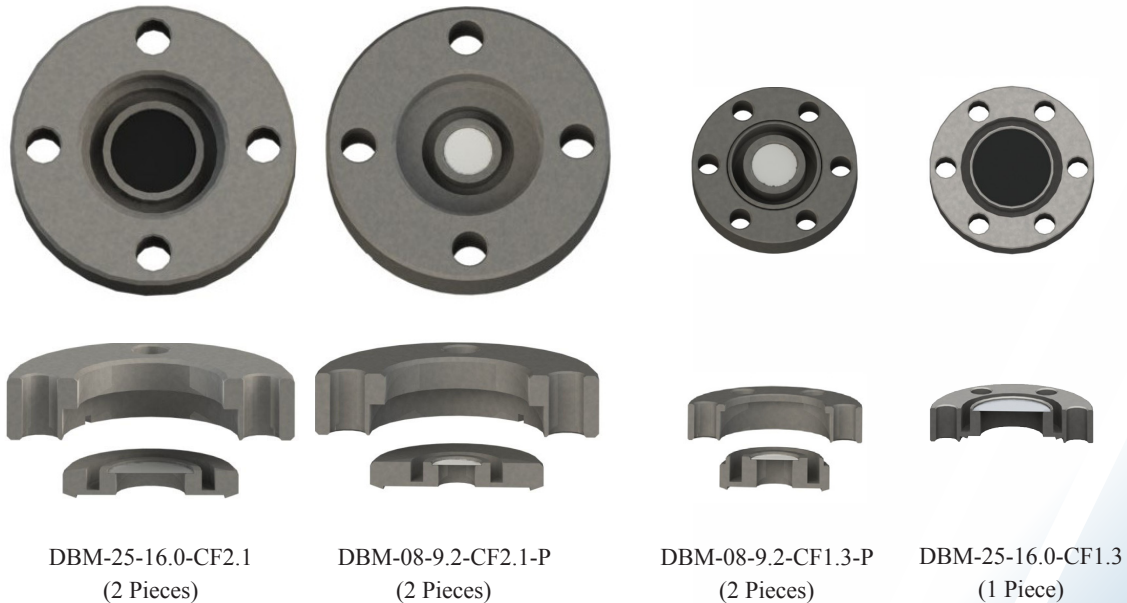
If you have difficulty mounting the flange, please contact Moxtek representatives for assistance.

Contact Moxtek for warranty related questions or go to our web site at www.moxtek.com/warranty.html.

*Moxtek guarantees that each window is leak tight before shipment. Improper tightening of the window may damage the window and will void the warranty.

Conflat Flange Options

Note: Drawing available upon request



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WIN-TECH-1001, Rev B
Subject to technical change without notice