



MATERION

PRODUCT BRIEF

# Flange Mounted Window Assemblies

For more than 50 years, Materion has been a trusted supplier of ultra-high vacuum (UHV) grade beryllium windows and CF flange assemblies for demanding industrial and research environments. Our diffusion-bonded beryllium X-ray windows deliver superior performance in high-temperature applications. Engineered for strength, purity and reliability, these assemblies are available in a range of flange diameters to meet specific system requirements.

To order a window, simply choose your required beryllium grade and thickness. The “Standard UHV Window Assemblies” table (at right) lists the flange sizes available with corresponding apertures and minimum foil thicknesses required to support a differential pressure of one atmosphere. Beryllium foil is available in IF-5™, PF-60® and PS-200® grades. If your application allows, selecting thicker window material will reduce cost and increase pressure differential ratings.

Materion diffusion bonded UHV beryllium windows can sustain bakeout temperatures to 450°C and are guaranteed leak tight to a helium mass spectrometer leak-rate of 1x10<sup>-9</sup> atm-cc/sec.

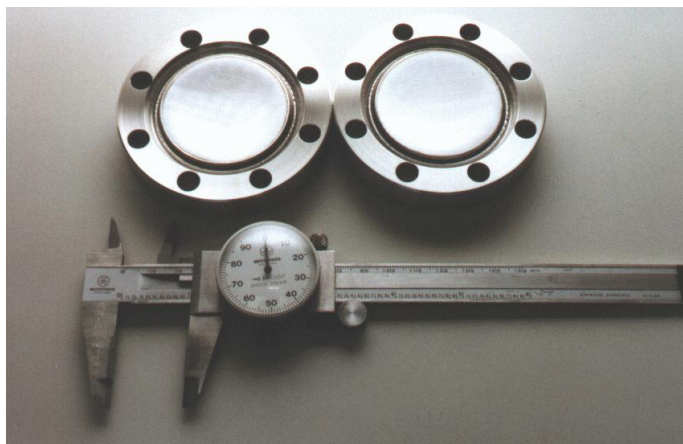
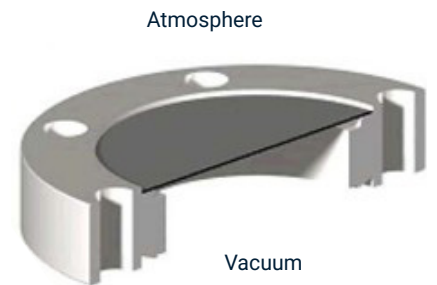


Figure 1: Standard flanged windows.



Shown above is a cutaway of a standard UHV beryllium window assembly.

To order, specify part number, foil grade and foil thickness (foil thickness is minimum allowed for aperture).

Table 1: Standard UHV Window Assemblies

Part Number	Flange Diameter inch / mm	Aperture Diameter inch / mm	Foil Thickness (Minimum) inch / mm
DB133053	1.33 / 34	0.53 / 13	0.005 / 0.13
DB275153	2.75 / 70	1.53 / 39	0.005 / 0.13
DB338200	3.38 / 86	2.0 / 51	0.010 / 0.25
DB450277	4.50 / 114	2.77 / 70	0.010 / 0.25
DB600427	6.0 / 152	4.27 / 108	0.020 / 0.50
DB800560	8.0 / 203	5.60 / 142	0.020 / 0.50

### Health & Safety Note:

Processing beryllium-containing alloys poses a health risk if safe practices are not followed. Inhalation of airborne beryllium can cause serious lung diseases in some individuals. Occupational safety and health regulatory agencies worldwide have set mandatory limits on occupational respiratory exposures. Read and follow the guidance in the Safety Data Sheet (SDS) before working with this material. The SDS and additional important beryllium health and safety information and guidance can be found at [beryllium-safety.com](http://beryllium-safety.com), [berylliumsafety.eu](http://berylliumsafety.eu) and [Materion.com](http://Materion.com). For questions on safe practices for beryllium-containing alloys, contact the Materion Product Stewardship Group at +1.800.862.4118 or contact us by email at [Materion-PS@Materion.com](mailto:Materion-PS@Materion.com).

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