

**Multi-CF™ UHV Spherical Hexadecagon:
 Vacuum Chamber with 6.0” and 1.33” CF Ports**

FOR USE IN:

- Compact UHV vacuum chambers
- Portable low-cost UHV systems
- High-complexity UHV subsystems
- UHV Specimen Transfer systems

FEATURES / OPTIONS:

- Easy access UHV Chamber
- Multiple CF sealing surfaces (6.0” and 1.33”) cut on a hollow sphere
- Annular port Grabber Grooves at 6.0” sealing ports for internal mounting.
- Unitary stainless steel 316L construction. Titanium custom also available
- No welds, no inside corners, highly polished
- Precise Port Alignment (<0.1 degrees)



*Spherical Hexadecagon Multi-CF™ UHV Vacuum Chamber
 MCF600-SphHexadecagon-F2A16 with (2) 6.0” and (16)
 1.33” CF Sealing Surface Ports*

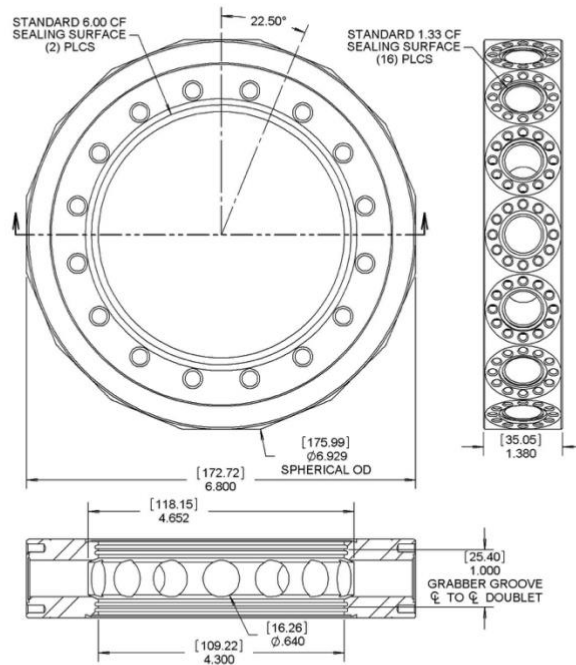
Multi-CF™ Spherical Hexadecagon

The Spherical Hexadecagon Multi-CF™ UHV vacuum chambers are based on a design of two main or primary CF sealing surface ports that are parallel and offset sections cut through a global hollow spherical form. A secondary series of sixteen (16) CF sealing surface ports are positioned in a plane perpendicular to the main surfaces and provides an equally spaced polygon array of ports in the form of a *hexadecagon*. These designs are precision CNC fabricated from a single piece of 316L Stainless Steel. The option of using various Titanium alloys is also available custom.

The Kimball Physics *MCF600-SphHexadecagon-F2C5* is a eighteen (18) port compact UHV vacuum chamber with two (2) 6.0” (F) main sealing surfaces and sixteen (16) 1.33” (A) CF secondary sealing surfaces. The 6.0” ports have internal annular Grabber Grooves that enable stable internal mounting of fixtures, devices and apparatus. Groove Grabber clamps are available from Kimball Physics (Multi-CF Hardware).

Please reach out to Kimball Physics to engage our specialists if you need a custom system for your specific application.

	MCF600-SphHexadecagon-F2A16
Multi-CF™ Fitting	Spherical Hexadecagon
COMMON APPLICATION	Small UHV Vacuum Chamber
CONSTRUCTION / MATERIAL	Unitary Stainless Steel 316L (Titanium available as option)
1.33”CF SEALING SURFACES	Sixteen (16) CF (A) Sealing Surface ports with (12) #8-32 tapped bolt holes per sealing surface. No Grabber Grooves available.
6.0” CF SEALING SURFACES	Two (2) CF (F) Sealing Surfaces with (16) 5/16-24 tapped bolt holes, plus one pair of Grabber Grooves (internal annular grooves) per sealing surface
EXTERNAL MOUNTING	No external mounting holes. External Mounting options are available utilizing port flanges. Please see Flange Adapters on Kimball Physics website.
INTERNAL WORKSPACE	Internal Volume: 28 in ³ (458 cc) Spherical ID: 4.70” in (119.25 mm)
WEIGHT	5.93 lbs (2.69 kg)



MCF600-SphHexadecagon-F2A16

All Dimensions are in inches.
(Millimeters are in parentheses)

References

For more information about Multi-Port CF (MCF) Vacuum Chambers and Accessories, visit our website at: [Multi-CF Hardware \(MCF™ Hardware and Accessories\)](http://www.kimballphysics.com)

Other References:

MCF Vacuum Chambers Overview (Vacuum Chambers and Accessories)
 Spherical Octagon- Multi-CF Hardware
 Spherical Cube- Multi-CF Hardware
 Spherical Cube Expanded- Multi-CF Hardware
 Spherical Hexagon- Multi-CF Hardware
 Thin Flange- Multi-CF Hardware
 Close Coupler (non-rotatable)- Multi-CF Hardware

Notes:

1. Cautions:

- Silver Plated Bolts or Equivalent Lubrication must be used.
 - Please measure the hole depth and other flange / copper ring /part thicknesses
 - Choose a correct bolt length such that the bolt doesn't bottom in the tapped hole prior to tightening the structure.
2. 3D Solid Models of all parts shown are available as STEP files.
They can be downloaded from Kimball Physics Website for interactive visualization and measurements in your CAD software environment.
 3. Specifications Subject to Change Without Notice.
 4. Images are not to scale
 5. DE Altobelli, DT Taylor 2/22/2023

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