

UHV VACUUM CHAMBERS WITH 4½, 2¾ AND 1⅓ CF PORTS LARGE DIAMETER INTERNAL SPHERICAL WORKSPACE

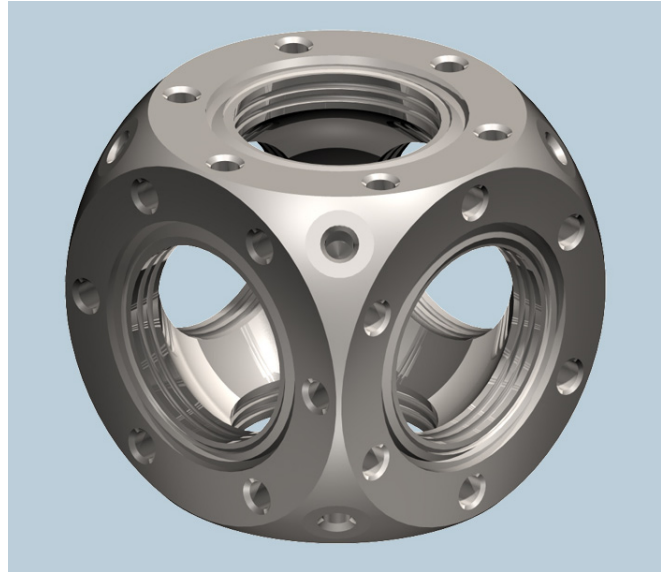
1⅓ and 2¾ Multi-CF Spherical Cubes

APPLICATIONS:

- ▶ Compact UHV Vacuum chamber
- ▶ Portable Low-Cost UHV Systems
- ▶ High-Complexity UHV SubSystems
- ▶ UHV Vacuum Manipulator Systems
- ▶ UHV Specimen Transfer Systems

FEATURES / OPTIONS:

- ▶ Easy-access unencumbered spherical workspace
- ▶ Grabber grooves on 2¾ CF sealing surfaces
- ▶ 1⅓ CF and 2¾ CF ports cut on a hollow sphere
- ▶ External tapped holes for system mounting
- ▶ Unitary stainless steel 316L construction
- ▶ No welds, highly polished
- ▶ Precise port alignment of < 0.1 deg.



Spherical Cube MCF275-SphCube-C6

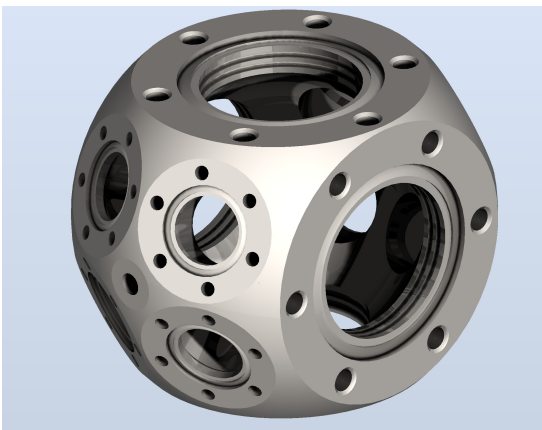


Spherical Cube
MCF133-SphCube-A6

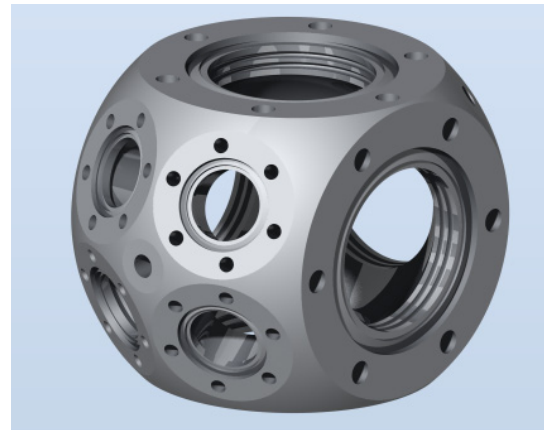
THE 1⅓ CF AND 2¾ CF SPHERICAL CUBES

The MCF133-SphCube-A6 Spherical Cube is a six port Multi-CF miniature UHV vacuum chamber consisting of a hollow sphere intersected by six 1⅓ CF sealing surfaces. The MCF275 Spherical Cubes are six to twelve-port Multi-CF miniature UHV vacuum chambers, consisting of hollow spheres intersected by four to six 2¾ CF sealing surfaces and/or zero to eight 1⅓ CF sealing surfaces. Interior space has been greatly increased over previous designs. Each 2¾ CF sealing surface has one pair of Grabber Grooves. Two to eight external tapped holes allow mounting without utilizing the gasket crushing bolts. The holes may also be used to attach small heaters for chamber bake-out.

	MCF133-SphCube-A6	MCF275-SphCube-C6	MCF275-SphCube-C5A4	MCF275-SphCube-C4A8
Multi-CF FITTING	Spherical Cube			
COMMON APPLICATION	Miniature UHV Vacuum Chamber			
CONSTRUCTION / MATERIAL	Unitary Stainless Steel 316L			
1⅓ CF SEALING SURFACES	Six with (6) 8-32 tapped bolt holes per sealing surface	None	Four with (6) 8-32 tapped bolt holes per sealing surface	Eight with (6) 8-32 tapped bolt holes per sealing surface
2¾ CF SEALING SURFACES	None	Six with (6) 1/4-28 tapped bolt holes, plus one pair of Grabber Grooves per sealing surface	Five with (6) 1/4-28 tapped bolt holes, plus one pair of Grabber Grooves per sealing surface	Four with (6) 1/4-28 tapped bolt holes, plus one pair of Grabber Grooves per sealing surface
EXTERNAL MOUNTING	Eight 8-32 tapped bolt holes	Eight 1/4-28 tapped bolt holes	Five 1/4-28 tapped bolt holes	Two 1/4-28 tapped bolt holes
PUMPING VOLUME	1 in ³ (16 cc) 1.1 in. spherical ID	11.9 in ³ (195 cc) 2.6 in. spherical ID	12.4 in ³ (203 cc) 2.6 in. spherical ID	12.9 in ³ (211 cc) 2.6 in. spherical ID

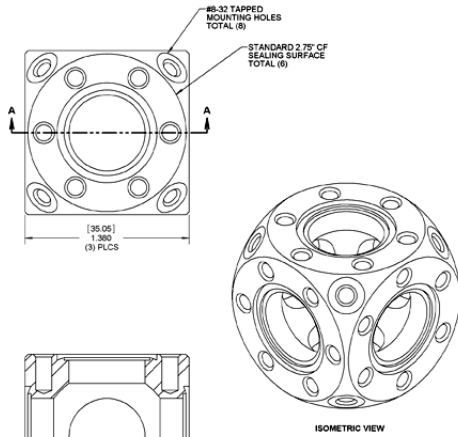


Spherical Cube MCF275-SphCube-C4A8
Note eight 1⅓ CF Ports

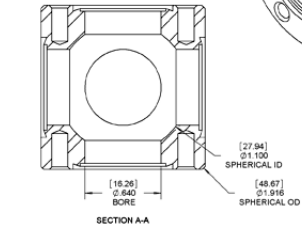
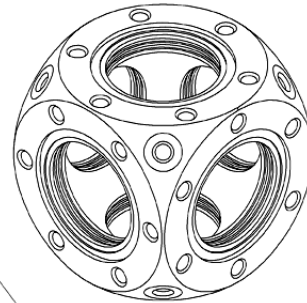


Spherical Cube MCF275-SphCube-C5A4
Note four 1⅓ CF Ports

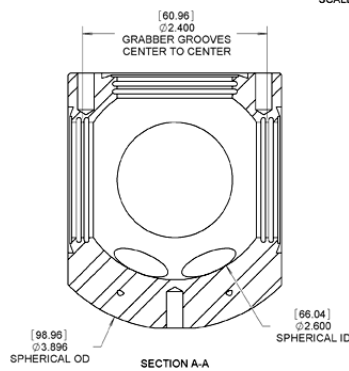
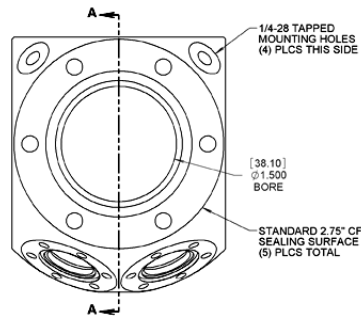
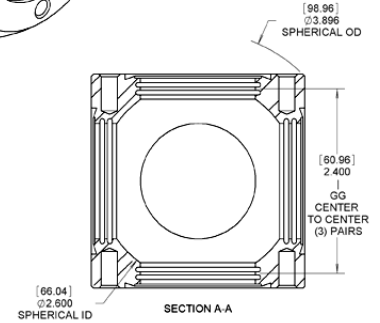
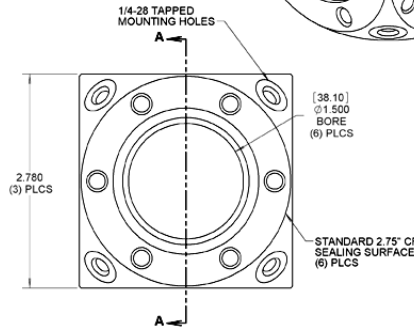
SCALE 1:1



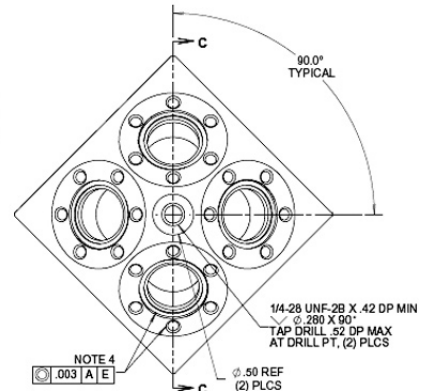
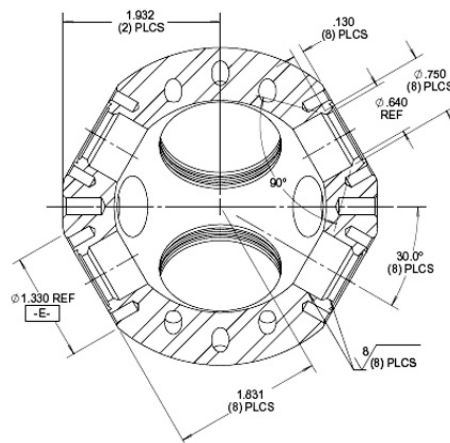
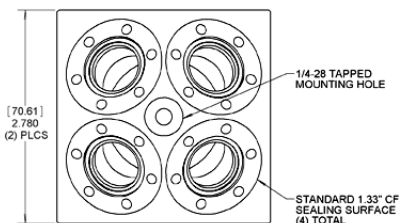
MCF275-SphCube-C6



MCF133-SphCube-A6



MCF275-SphCube-C5A4



MCF275-SphCube-C4A8

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS IN PARENTHESES)

CAUTIONS:
 (1) SILVER PLATED BOLTS OR EQUIVALENT LUBRICATION MUST BE USED
 (2) USE CORRECT BOLT LENGTH

4½ Multi-CF Spherical Cubes MCF450-SphCube-E6 MCF450-SphCube-E6A8

FEATURES / OPTIONS:

- ▶ Easy access small UHV vacuum chamber
- ▶ Unencumbered 4.800" diameter spherical workspace
- ▶ Grabber grooves on 4½ CF sealing surfaces
- ▶ 4½ CF and optional 1⅓ CF ports cut on a hollow sphere
- ▶ Unitary stainless steel 316L construction
- ▶ No welds, highly polished
- ▶ Precise port alignment of <0.1 deg.

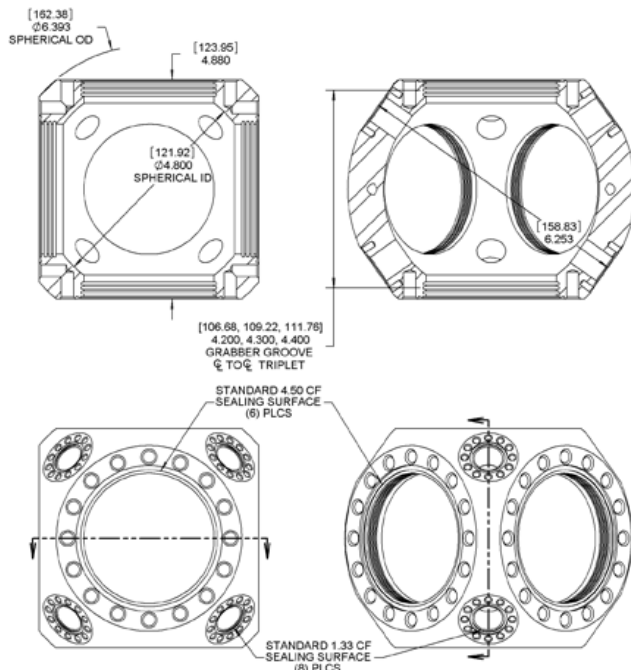


MCF450-SphCube-E6A8 and MCF450-SphCube-E6

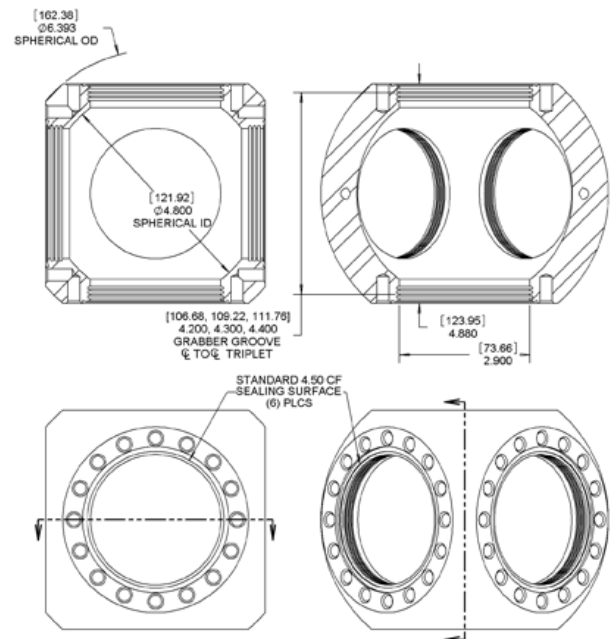
THE 4½ CF SPHERICAL CUBE

The 4½ CF Spherical Cubes are six or fourteen port small Multi-CF UHV vacuum chambers, consisting of hollow spheres intersected by six 4½ CF sealing surfaces and zero or eight 1⅓ CF sealing surfaces. Interior space has been greatly increased over previous designs. Each 4½ CF sealing surface has one triplet of Grabber Grooves.

	MCF450-SphCube-E6	MCF450-SphCube-E6A8
Multi-CF FITTING	Spherical Cube	
COMMON APPLICATION	Small UHV Vacuum Chamber	
CONSTRUCTION / MATERIAL	Unitary Stainless Steel 316L	
1⅓ CF SEALING SURFACES	None	Eight with (12) 8-32 tapped bolt holes per sealing surface
4½ CF SEALING SURFACES	Six with (8) 5/16-24 tapped bolt holes, plus one triplet of Grabber Grooves per sealing surface	Six with (8) 5/16-24 tapped bolt holes, plus one triplet of Grabber Grooves per sealing surface
EXTERNAL MOUNTING	None	None
PUMPING VOLUME	69.9 in ³ (1,145 cc) 4.800 in. Spherical ID	71.6 in ³ (1,174 cc) 4.800 in. Spherical ID



MCF450-SphCube-E6A8



MCF450-SphCube-E6

ALL DIMENSIONS ARE IN INCHES
(MILLIMETERS IN PARENTHESES)

CAUTIONS:
(1) SILVER PLATED BOLTS OR
EQUIVALENT LUBRICATION
MUST BE USED
(2) USE CORRECT BOLT LENGTH