

**Multi-CF™ UHV Vacuum Perimeter Weld Flanges with
 8.0", 6.0", 4.5", 2.75" and 1.33" CF Ports**

APPLICATIONS:

- Medium and Larger Spherical Chambers with Improved Access and Reduced Overall System Size
- Add Internal Mounting Capability (Grabber Grooves) to Existing Systems
- Chambers with Maximum Internal Volume for a Given CF Size

FEATURES / OPTIONS:

- Oversize / Expanding Conical Bores
- Easy Welding into Spherical Chambers
- Larger Internal Capacity for the Same Overall Size
- Double Density Bolt Holes
- Tapped Holes that Do Not Require Nut Clearance



Family of Multi-CF™ Perimeter Weld Flange Designs

Multi-CF™ Perimeter Weld Flanges

The Perimeter Weld Flanges are a weldable series of flanges that include the Conflat (CF) interface and the "Groove Grabber" Internal Mounting System along its internal bore (in sizes noted below). The most common application is to weld them into spherical vacuum chambers to create an additional port. They also may be welded into tubes, cones, ellipsoids,

plates, and other shapes. By placing the weld lip on the outer perimeter of the flanges, it is possible to significantly improve access to the interior of a system, while simultaneously reducing the overall size. Each 2.75" flange or larger CF flange has one or more pairs of Grabber Grooves.

Model	MCF133-PWeldFlg	MCF275-PWeldFlg	MCF450-PWeldFlg	MCF600-PWeldFlg	MCF800-PWeldFlg
Part Number	53-630000	53-630800	53-630200	53-630300	53-630400
Multi-CF Fitting	Perimeter Weld Flange				
Common Application	Direct welding into spherical chambers				
Construction / Material	Unitary Stainless Steel 316				
CF Sealing Surfaces	One 1.33" CF flange with (12) 8-32 tapped bolt holes.	One 2.75" CF flange with (12) 1/4-28 tapped bolt holes plus one pair Grabber Grooves	One 4.50" CF flange with (12) 5/16-24 tapped bolt holes plus one pair Grabber Grooves	One 6.00" CF flange with (32) 5/16-24 tapped bolt holes plus one pair Grabber Grooves	One 6.00" CF flange with (40) 5/16-24 tapped bolt holes plus one pair Grabber Grooves
Bore Diameter	0.640 inch	1.500 inch	2.900 inch	4.300 inch	6.300 inch
Weld Lip Diameter	1.200 inch	2.599 inch	4.000 inch	5.840 inch	7.840 inch

Perimeter Weld Flanges

Perimeter Weld Flange Series



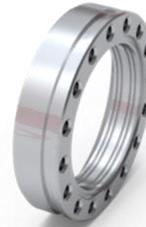
MCF133-PWeldFig 1.33" Perimeter Weld Flange with Grabber Grooves



MCF275-PWeldFig 2.75" Perimeter Weld Flange with Grabber Grooves



MCF450-PWeldFig 4.50" Perimeter Weld Flange with Grabber Grooves



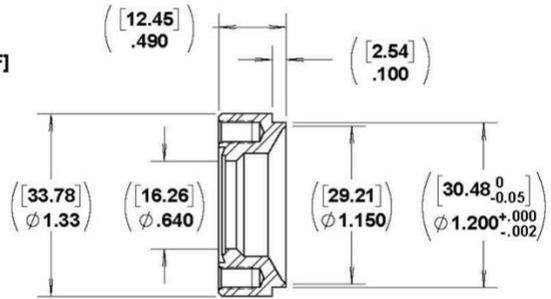
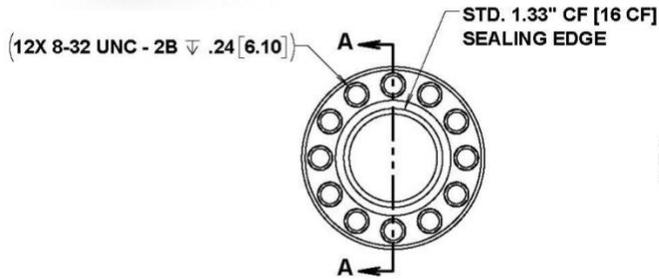
MCF600-PWeldFig 6.00" Perimeter Weld Flange with Grabber Grooves



MCF800-PWeldFig 8.00" Perimeter Weld Flange with Grabber Grooves

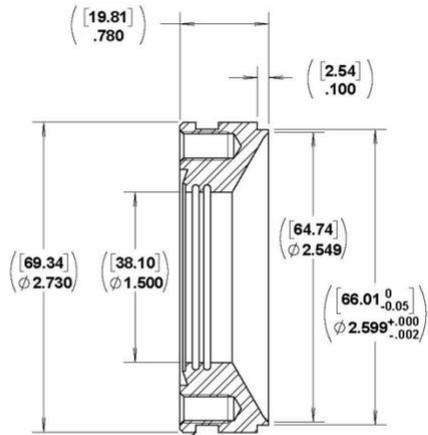
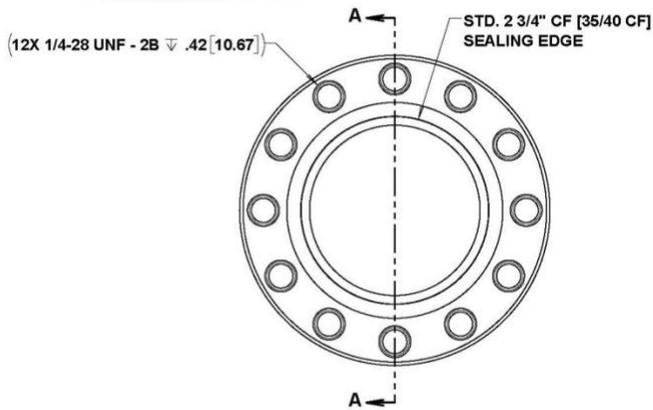


Notes: Images are not to scale.



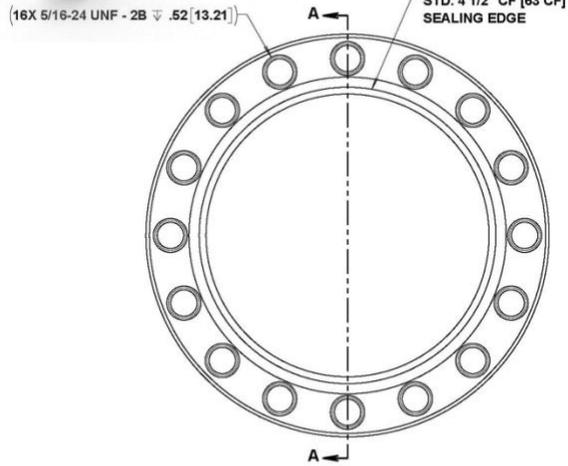
SECTION A-A

MCF133-PWeldFig (P/N: 53-630000) 316L

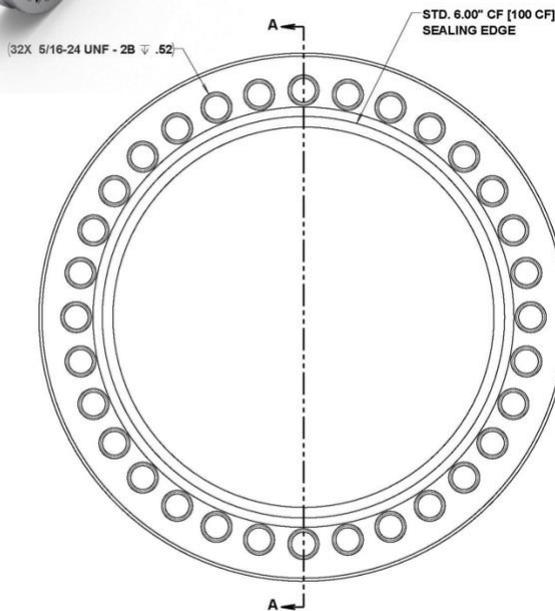
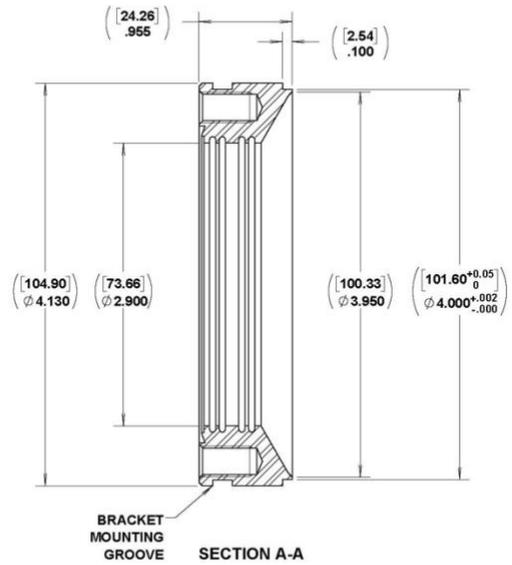


BRACKET MOUNTING GROOVE SECTION A-A

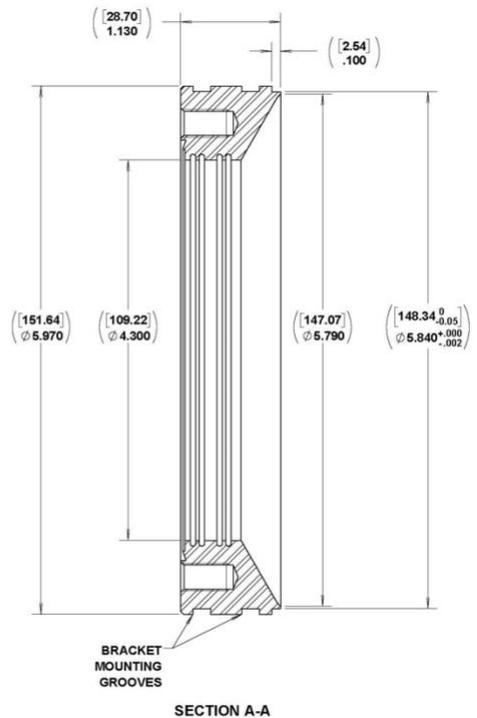
MCF275-PWeldFig (P/N: 53-630800) 316L

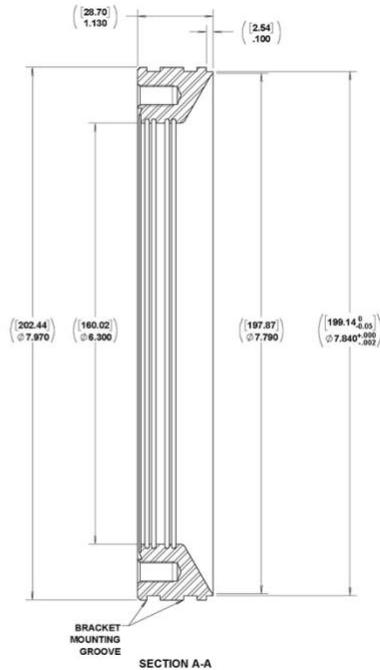
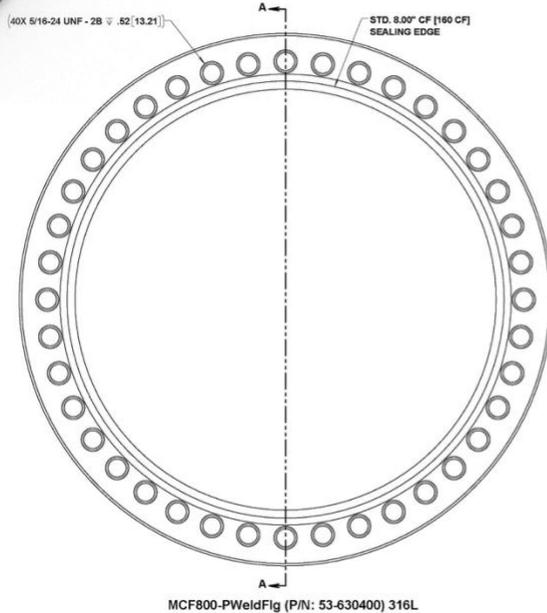


MCF450-PWeldFlg (P/N: 53-630200) 316L



MCF600-PWeldFlg (P/N: 53-630300) 316L





MCF800-PWeldFig (P/N: 53-630400) 316L

*Dimensions Above for 1.33", 2.75", 4.50",
6.00", and 8.00" Perimeter Weld Fittings.
Drawings and images are not to scale. Metric
units in (millimeters).*

References

For more information about Multi-Port CF (MCF™) Vacuum Chambers and Accessories, visit our website at: Multi-CF™ Hardware

Other References

Multi-CF (MCF) Vacuum Hardware Overview

Notes:

1. Cautions:

- Silver Plated Bolts or Equivalent Lubrication must be used.
- Please carefully 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, 6/15/2023

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