

UHV VACUUM ADAPTOR WITH 2³/₄ CF AND 1¹/₃ CF PORTS ROTATABLE 2³/₄ CF BOLT RING ACCEPTS ARBITRARY LENGTH BOLTS

APPLICATIONS:

ELECTRON GUN / ION SOURCE MOUNTING
DETECTOR SUBSYSTEMS
HIGH-COMPLEXITY UHV SUBSYSTEMS
UHV VACUUM MANIPULATOR SYSTEMS
FEEDTHROUGH CLUSTERS

MCF275-FM1R05-A

FEATURES / OPTIONS:

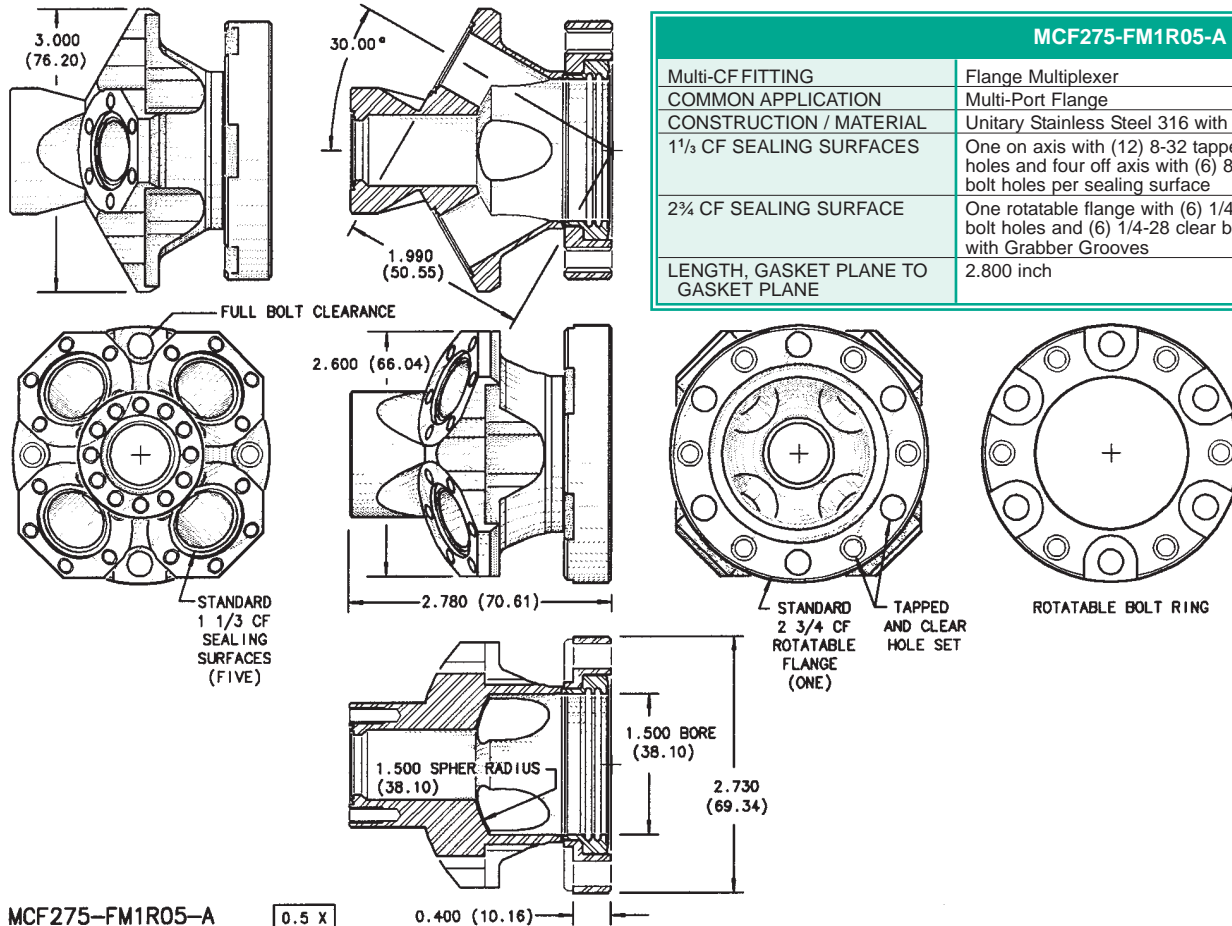
MOUNT FIVE 1¹/₃ CF ITEMS ON SINGLE 2³/₄ CF PORT
ROTATABLE TAPPED HOLE / CLEAR HOLE 2³/₄ CF BOLT RING
EASY INTERIOR ACCESS
GRABBER GROOVES ON 2³/₄ CF SEALING SURFACE
CAPACITY FOR ARBITRARY-LENGTH 1/4-28 BOLTS
UNITARY STAINLESS 316 CONSTRUCTION WITH ONE WELD

THE MCF275-FM1R05-A FLANGE MULTIPLEXER

The original multiplexer design (unpatented) was developed at Kimball Physics in 1983. Since that time, several companies have taken up the design. The MCF275-FM1R05-A Flange Multiplexer is a redesign which incorporates several new features: a rigid unitary construction where only one weld (of previous eight) remains; the capability to use arbitrary length bolts; the inclusion of high strength Grabber-Groove technology; improved port alignment accuracy; and better UHV cleanliness. Two sets of bolt holes, one tapped and one clear, allow the user to choose the mode of attachment. The bolt ring is confined such that it cannot slide axially back from the sealing surface; thus the sealing surface is not exposed to damage (as is the case with ordinary rotatable flanges).



Flange Multiplexer MCF275-FM1R05-A



MCF275-FM1R05-A	
Multi-CFFITTING	Flange Multiplexer
COMMON APPLICATION	Multi-Port Flange
CONSTRUCTION / MATERIAL	Unitary Stainless Steel 316 with one weld
1 ¹ / ₃ CF SEALING SURFACES	One on axis with (12) 8-32 tapped bolt holes and four off axis with (6) 8-32 tapped bolt holes per sealing surface
2 ³ / ₄ CF SEALING SURFACE	One rotatable flange with (6) 1/4-28 tapped bolt holes and (6) 1/4-28 clear bolt holes with Grabber Grooves
LENGTH, GASKET PLANE TO GASKET PLANE	2.800 inch

MCF275-FM1R05-A

0.5 X

0.400 (10.16)

MCF275-FM2R04-A

FEATURES / OPTIONS:

COMPACT INSTRUMENT HOUSING FOR MOUNTING SUBSYSTEMS
 TWO AXIAL 2 3/4 CF PORTS (ONE ROTATABLE WITH TAPPED AND CLEAR HOLES),
 EQUIPPED WITH THREE PAIRS OF 2 3/4 GRABBER GROOVES
 FOUR AUXILIARY 1 1/3 CF PORTS,
 EQUIPPED WITH DOUBLE BOLT HOLE SETS
 CAPACITY FOR ARBITRARY LENGTH 1/4-28 BOLTS,
 UNITARY STAINLESS 316 CONSTRUCTION WITH ONE WELD

NEW PART

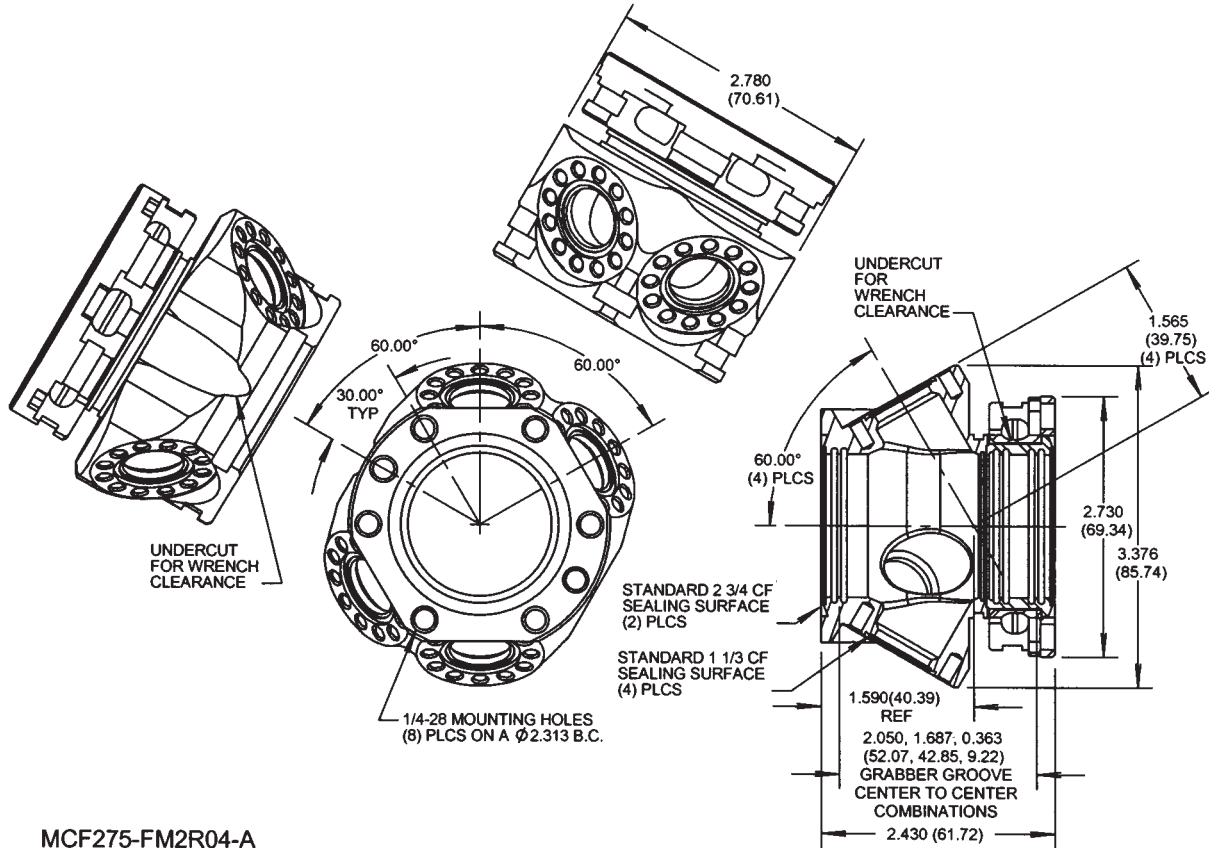


Flange Multiplexer MCF275-FM2R04-A

MCF275-FM2R04-A	
Multi-CF FITTING	Flange Multiplexer
COMMON APPLICATION	Instrument Housing, Multi-Port Flange
CONSTRUCTION / MATERIAL	Unitary Stainless Steel 316 with one weld
1 1/3 CF SEALING SURFACES	Four off axis with (12) 8-32 tapped bolt holes per sealing surface
2 3/4 CF SEALING SURFACES	One rotatable flange with (6) 1/4-28 tapped bolt holes and (6) 1/4-28 clear bolt holes and two pairs of Grabber Grooves. One non-rotatable flange on axis with (8) 1/4-28 tapped bolt holes and one pair of Grabber Grooves.
LENGTH OF PART	2.430 inch
LENGTH, GASKET PLANE TO GASKET PLANE	2.450 inch

THE MCF275-FM2R04-A FLANGE MULTIPLEXER / INSTRUMENT HOUSING

The MCF275-FM2R04-A Flange Multiplexer is designed as a compact Ultra-High-Vacuum instrument housing, though it may be used in numerous ways. It's compressed axial form offers versatility and easy access. The axes of the auxiliary 1 1/3 CF ports all pass through the main axis 1.575 inches (40.64 mm) from the flange gasket center plane. A total of three pairs of 2 3/4 grabber grooves are available for mounting interior apparatus.



MCF275-FM2R04-A

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS IN PARENTHESES)

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

MCF275-FM4R04-A

FEATURES / OPTIONS:

INSTRUMENT HOUSING WITH UNUSUAL VERSATILITY
 EXCEPTIONAL INTERIOR VOLUME AND ACCESS
 TWO AXIAL 2 $\frac{3}{4}$ CF PORTS (ONE ROTATABLE),
 TWO SIDE 2 $\frac{3}{4}$ CF PORTS,
 AND FOUR AUXILIARY 1 $\frac{1}{3}$ CF PORTS,
 ALL 2 $\frac{3}{4}$ PORTS EQUIPPED WITH GRABBER GROOVES
 ALL PORTS EQUIPPED WITH DOUBLE BOLT HOLE SETS
 UNITARY STAINLESS 304 CONSTRUCTION WITH ONE WELD



Flange Multiplexer MCF275-FM4R04-A

MCF275-FM4R04-A	
Multi-CF FITTING	Flange Multiplexer
COMMON APPLICATION	Instrument Housing, Multi-Port Flange
CONSTRUCTION / MATERIAL	Unitary Stainless Steel 316 with one weld
1 $\frac{1}{3}$ CF SEALING SURFACES	Four off axis with (12) 8-32 tapped bolt holes per sealing surface
2 $\frac{3}{4}$ CF SEALING SURFACES	One rotatable flange with (6) 1/4-28 tapped bolt holes and (6) 1/4-28 clear bolt holes. One non-rotatable flange on axis with (12) 1/4-28 tapped bolt holes. Two sealing surfaces, one on each side, each with (12) 1/4-28 bolt holes. All 2 $\frac{3}{4}$ CF ports have Grabber Grooves.
LENGTH OF PART	4.180 inch
LENGTH, GASKET PLANE TO GASKET PLANE	4.200 inch

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

THE MCF275-FM4R04-A FLANGE MULTIPLEXER / INSTRUMENT HOUSING

The MCF275-FM4R04-A Flange Multiplexer is designed mainly as an Ultra-High-Vacuum instrument housing, though it may be used in numerous ways. It has unusual versatility and access. The axes of the auxiliary 1 $\frac{1}{3}$ CF ports all pass through the main axis at the rotating flange gasket center plane. Six sets of grabber grooves are available for mounting interior apparatus. Additional versions of this part with additional features are being designed.

