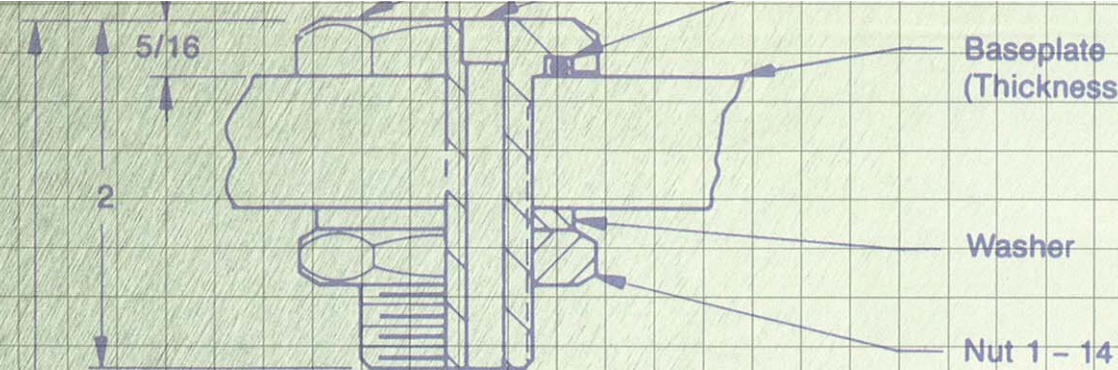
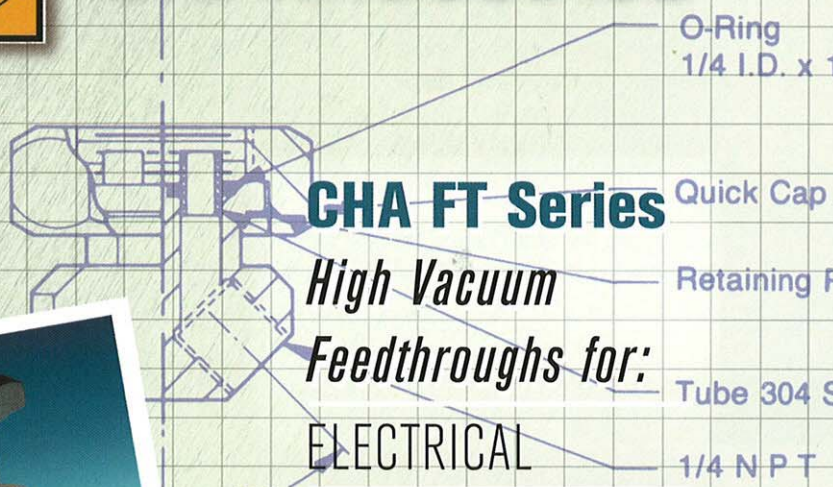


# Feedthroughs



## CHA Industries

3 1/4

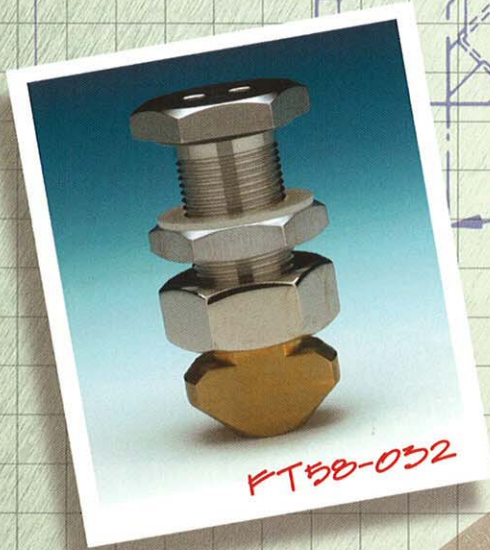


### CHA FT Series

*High Vacuum*

*Feedthroughs for:*

- ELECTRICAL
- INSTRUMENTATION
- FLUID
- MOTION
- MISCELLANEOUS



CHA FT Series high vacuum feedthroughs are designed so that clean surfaces are on the vacuum side. Installation of the feedthrough from the vacuum side puts the body of the feedthrough in the vacuum work area and usually results in greater convenience in making set-up changes.

- A one-nut compression mounting eliminates the need for drilled and tapped mounting holes.
- A Vitor® seal in a specially shouldered groove gives proper seal compression without special torquing.
- The washer above the compression nut is provided to prevent damage to mounting surfaces.
- To install in a system without an entry port, all that is required is to drill a 1" hole. (Spot facing may be required to give satisfactory sealing surface on the vacuum side.)

CHA feedthroughs are used in baseplates with one-inch-diameter entry ports or with a CHA FRT series feedthrough ring, which is available in aluminum or stainless steel. With an adapter flange, the FT series feedthroughs can be used with feedthrough rings with 2-1/2" entry ports such as the CHA FR ring. The flanges are available in either aluminum or stainless steel.

# Electrical

## FT58-001 FT58-002

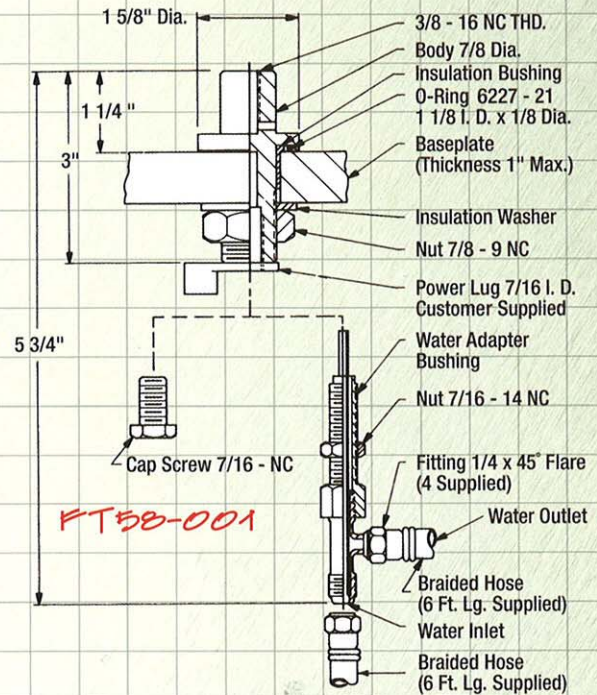
(Water cooled)

*High current, low voltage*

Maximum voltage 100V  
Maximum amperes 500

Two versions, with and without water cooling, are for high current transmission and are normally used with a standard resistance power supply. The water cooled feedthrough is provided with fittings and 2 six-foot lengths of braided hose. The body is aluminum.

For extended use at 500 amps, the water cooled model is recommended.



FT58-001

FT58-002

## FT58-003

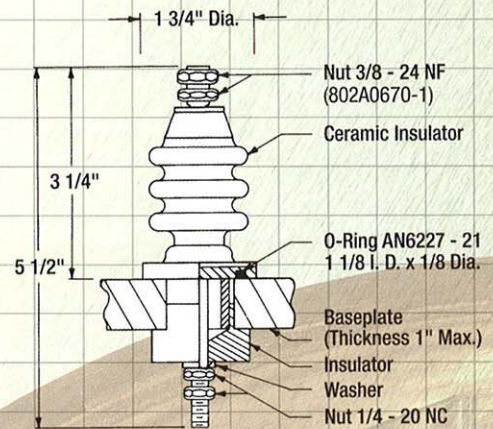
*Multipurpose*

Maximum voltage 6000V  
Maximum amperes 35

FT58-003 has a wide range of usage for medium current and semi-high voltage applications. The feedthrough is to be mounted with the ceramic surface of the insulator on the vacuum side of the chamber. By not presenting the interior of the insulator to vacuum, a source of gas entrapment is eliminated.

This feedthrough may be used for heater power or AC or DC glow discharge.

Feedthrough Shield Part #5037 sold separately.



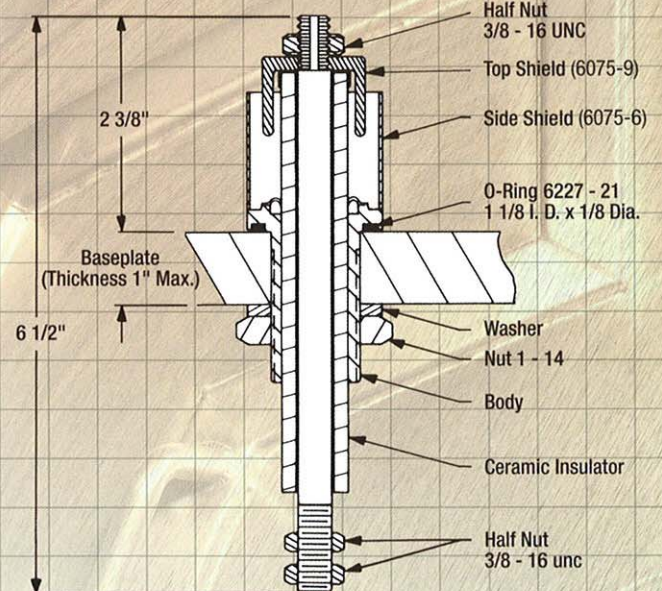
FT58-003

## FT58-009

*High current, high voltage*

Maximum voltage 12 KV  
Maximum amperes 100

The high power capacity of this feedthrough is designed for use with electron beam sources. It has built-in, top and side deposition shields. It features an oversize conductor which minimizes failure at the threads, a common problem in feedthroughs for EB applications.



FT58-009

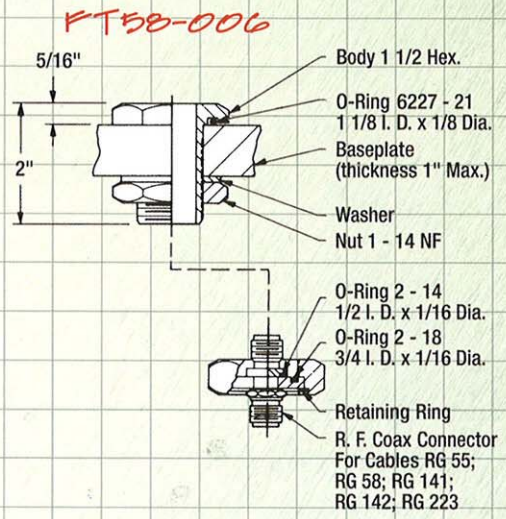
# Instrumentation

## FT58-006

### Ring type internal solder lugs Internal pins

The primary use of these feedthroughs is instrument read-out. They use the same stainless steel body with different service connectors mounted in a quick disconnect cap for easy installation.

FT58-006, TNC coaxial header, covers most low power, high frequency applications. A number of coaxial cables may be used.

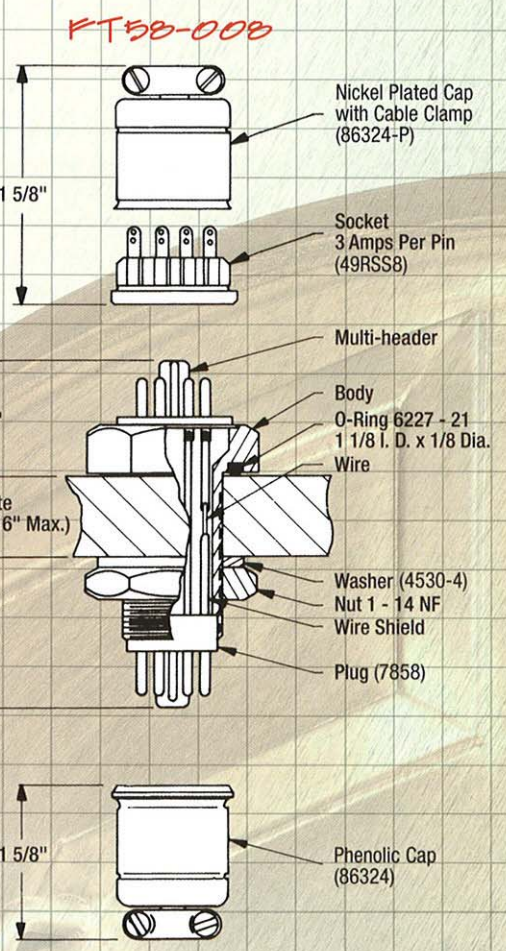


## FT58-008

### Instrumentation

This 8-pin feedthrough features greater ease of access to the pins and removable sockets at each end. The plugs are keyed for positive pin location. Primary use is instrument read-out.

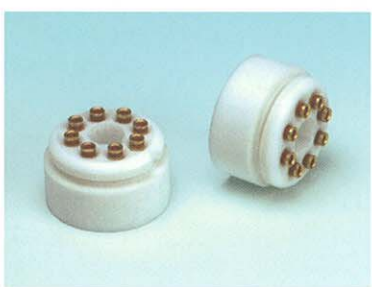
When used with CHA 8-Pin High Current Socket, Part No. 7107, 20 Amps per pin may be conducted through this feedthrough giving it a wide range of uses.



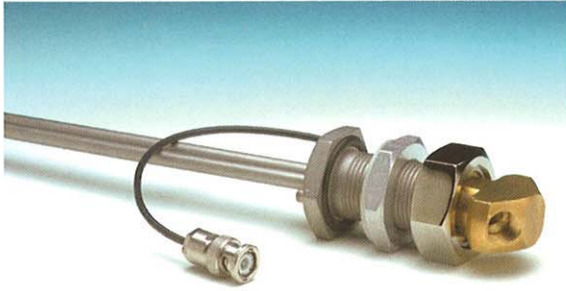
## 7107

### High Current 8-Pin Socket Set for FT58-008 Feedthrough

This socket allows the FT58-008 feedthrough to conduct 20 Amps per pin increasing its versatility.



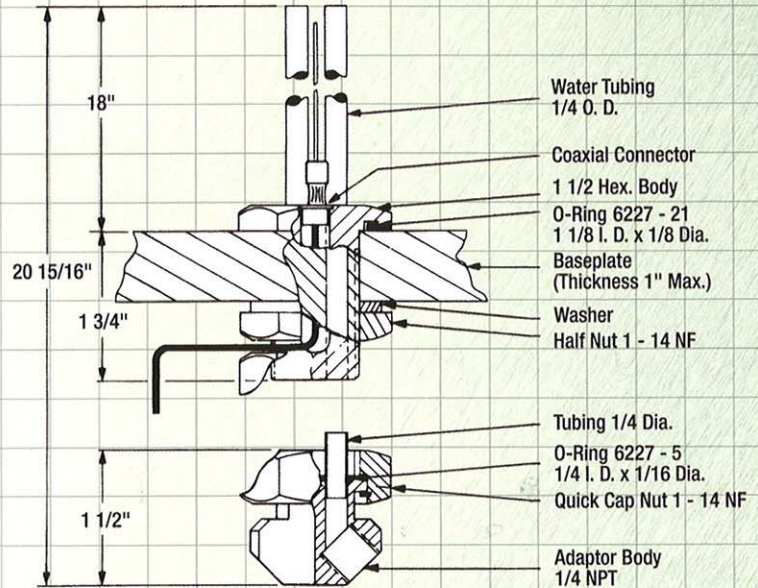
# Instrumentation



## FT58-036

### Instrument service

Combination feedthrough for coaxial electrical connection and dual pass fluid service to deposition monitor head.

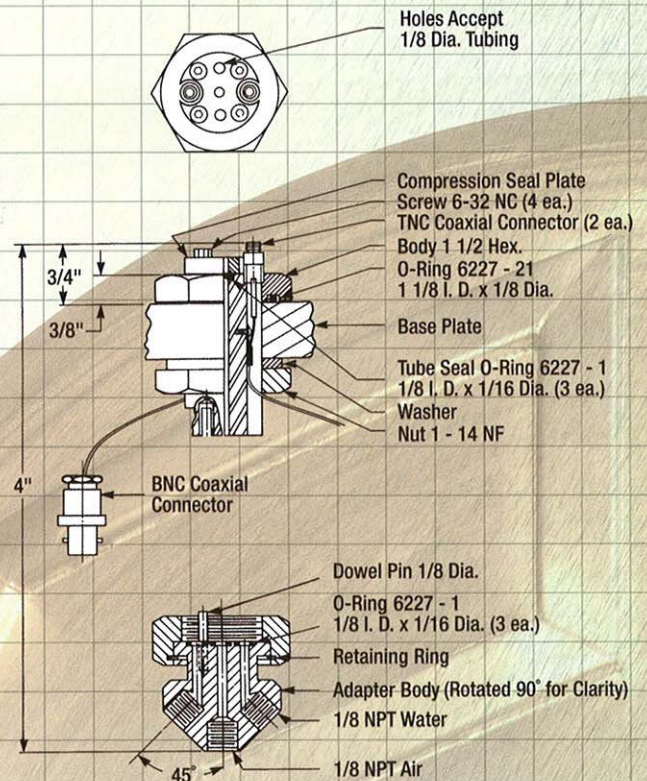


FT58-036

## FT58-039

### Instrument service for dual deposition monitors

This Combination feedthrough has two coaxial electrical connections and three fluid service for 1/8" diameter tubing. This feedthrough is ideal for installation of Inficon's dual sensor monitor head with shutter.



FT58-039

# Fluid

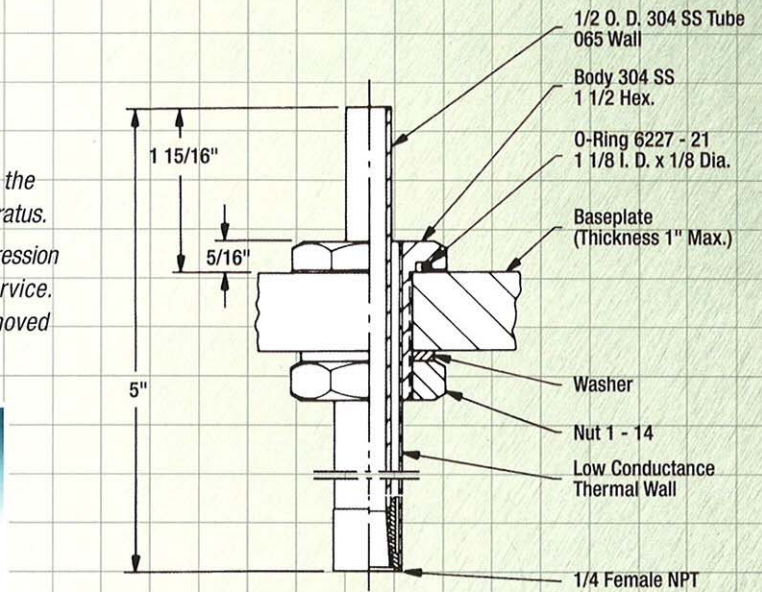
CHA fluid feedthroughs are designed for permanent connections within the chamber. They can be either directly welded, soldered or brazed to the apparatus.

A common problem in vacuum systems is making an effective internal compression seal on fluid lines so that they can be conveniently disconnected for service. The entire apparatus with feedthrough and connecting tubes may be removed or reinstalled as a unit.

## FT58-030

### Cryogenic fluid

FT58-030 has a vacuum guard providing low thermal conductance which protects the O-ring from freezing and minimizes L<sup>n2</sup> boil-off.

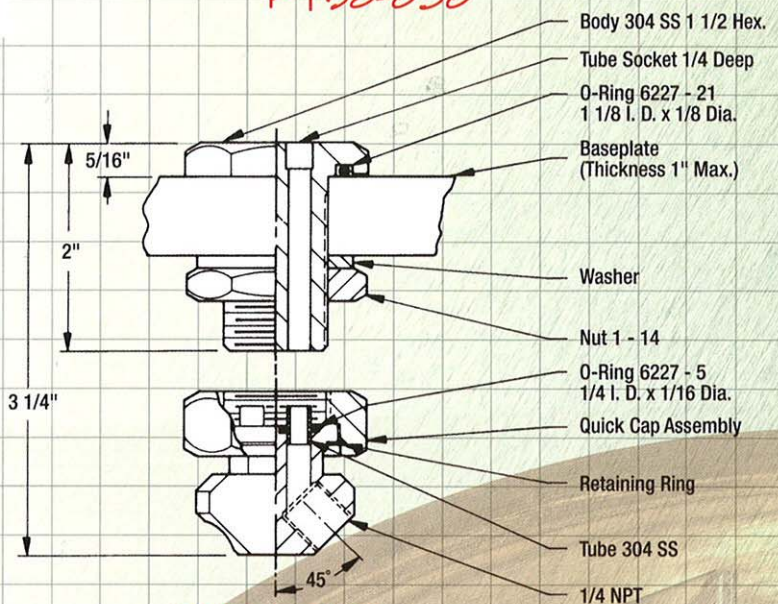


FT58-030

## FT58-032 for 1/4" O.D. tubing

### Dual pass: water or other fluid

The body is type 304 SS. The unit is mounted in the vacuum chamber and tubing is connected directly to the unit. The base assembly is designed for quick removal. It accepts any standard 1/4" NPT fitting and may be permanently connected to service lines.

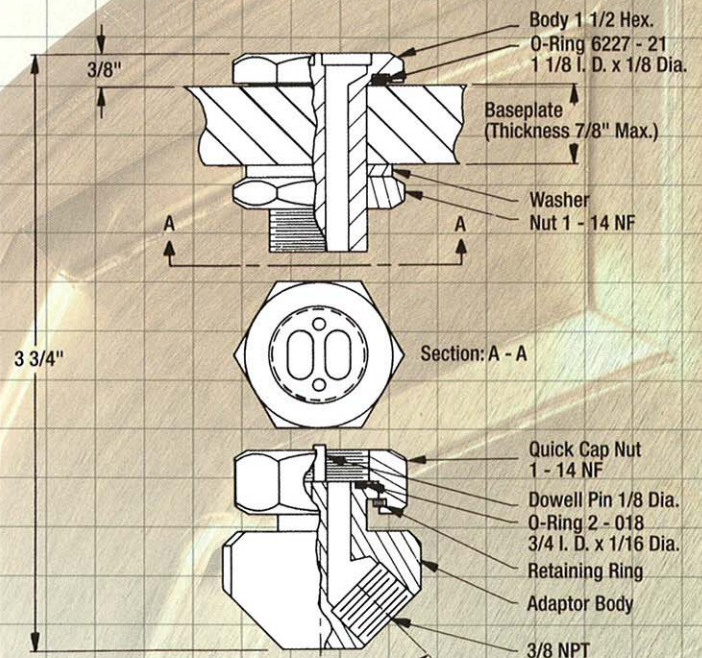


FT58-032

## FT58-037 for 3/8 O.D. tubing FT58-038 for 1/2 O.D. tubing

### Dual pass: water or other fluid

These feedthroughs are similar to FT58-032 except that they have an elliptical fluid passage through the body of the feedthrough. This provides the greater coolant flow needed for certain requirements, such as electron beam guns. The body is nickel plated brass with tubing ports unplated to facilitate silver soldering. The base assembly is designed for quick removal. It accepts any standard 3/8" NPT fitting and may be permanently connected to service lines.



FT58-038

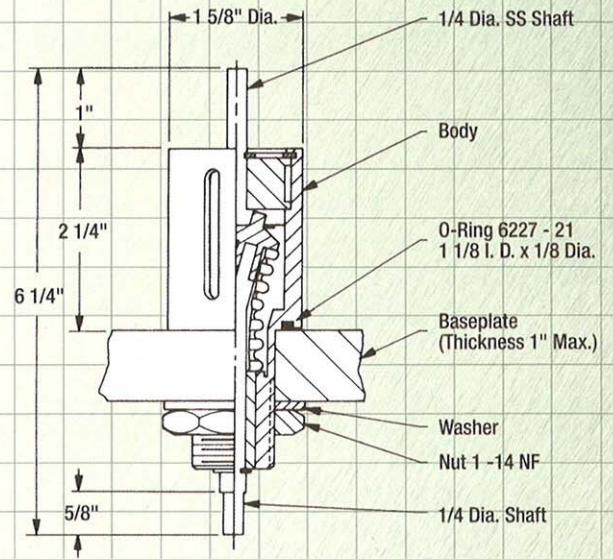
# Motion

## FT58-021

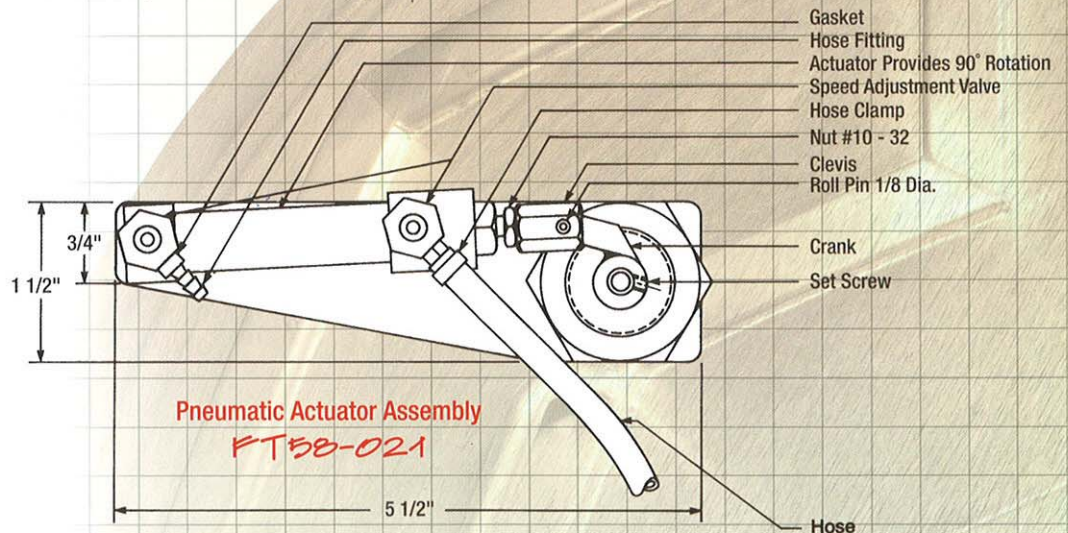
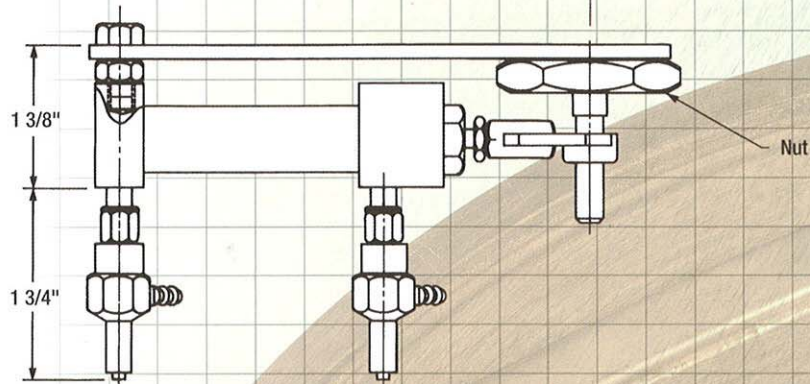
*Bellows sealed rotary*



FT58-021 provides rotary motion within the vacuum chamber. Unlike many bellows sealed feedthroughs which present internal surfaces to vacuum, this unit is fully vented and is easily cleaned and pumped because only the external surface of the bellows is exposed to vacuum. FT58-021 has a standard 1/4" shaft which, with drive options, makes it a useful tool for many applications such as shutter operation. Also shown in this drawing is EF75-221 electro-pneumatically actuated linkage for remote or automatic operation of the rotary feedthrough.



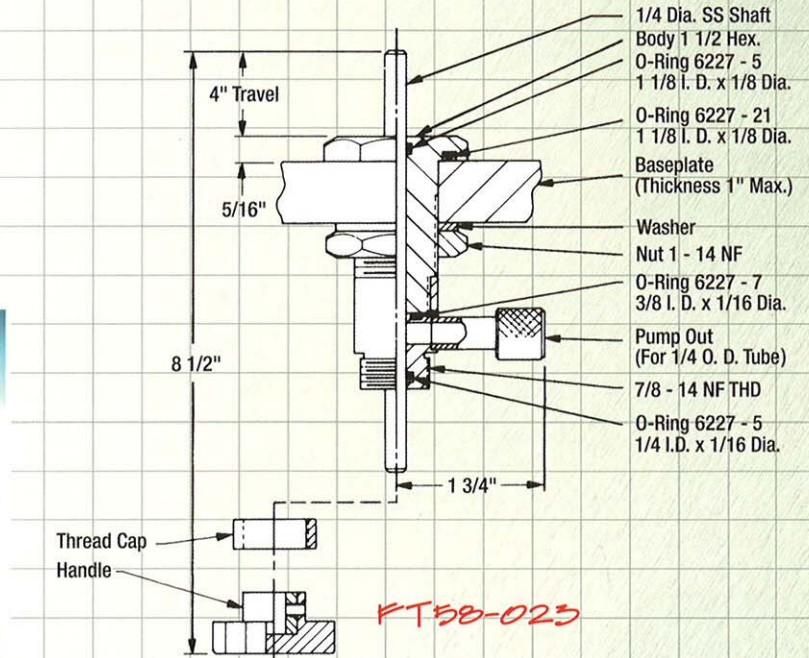
Note:  
4-way air valve supplied with actuator assembly to be remotely mounted by customer.  
Power: 115/1/50/60 VAC  
Air: 75 to 125 PSI



## FT58-023

### Push-pull rotary

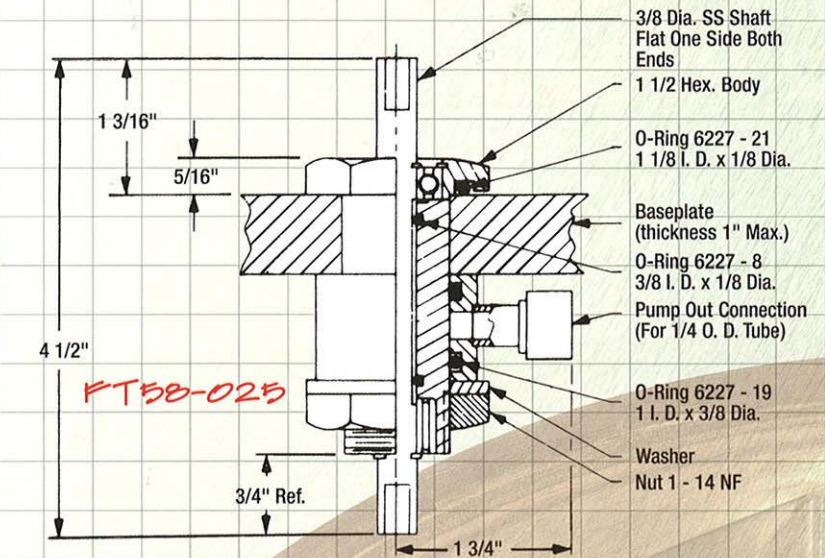
FT58-023 provides both rotation and linear motion in the chamber. The unit has a differentially pumped O-ring seal.



## FT58-025

### 3/8" rotary

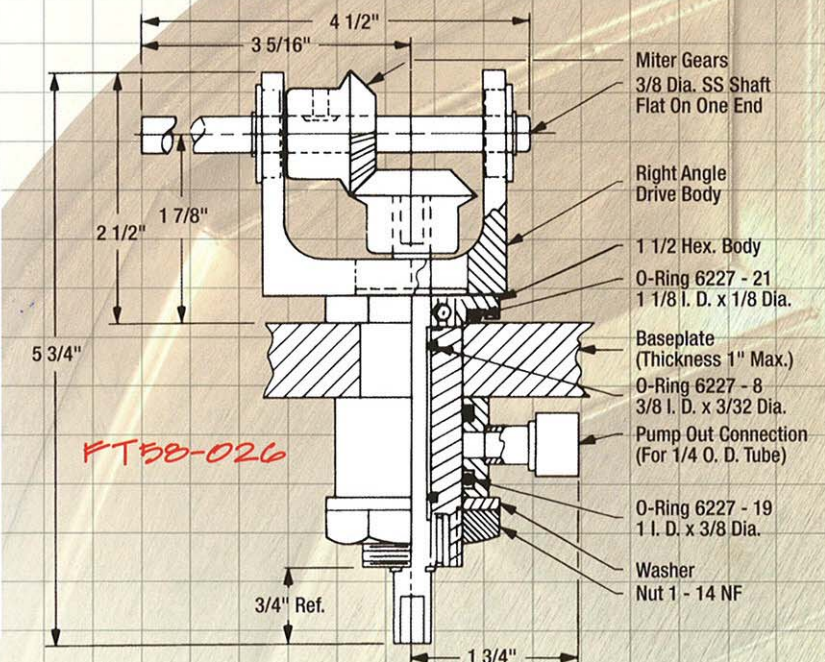
The feedthrough has a differentially pumped O-ring seal on the solid 3/8" stainless steel shaft. It is particularly suited for applications where low R.P.M. and high torque are required.



## FT58-026

### 3/8" right angle rotary

Similar to FT58-025 with an internal ball bearing mounted, right angle drive.

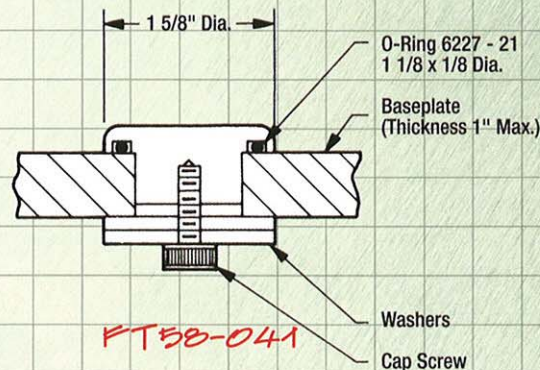


# Miscellaneous

## FT58-041

### Bank-off plug

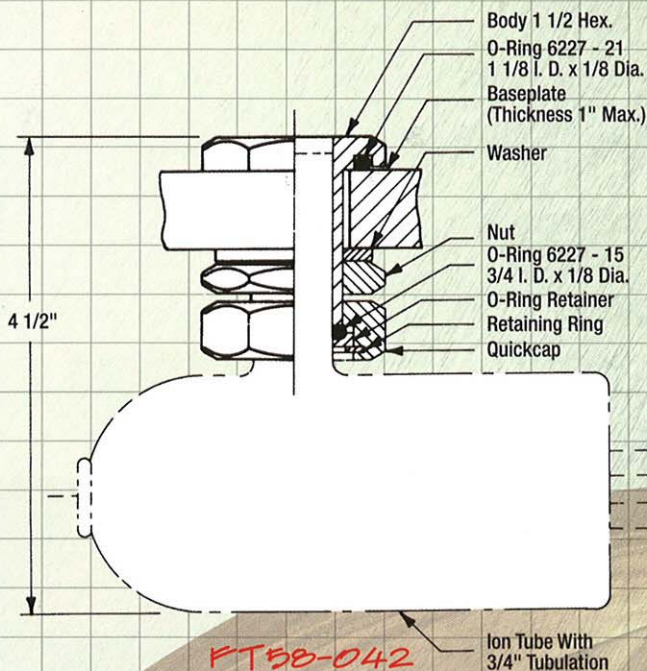
The FT58-041 is used to seal 1" diameter feedthrough ports not in use. Made of machined aluminum.



## FT58-042

### 3/8" rotary

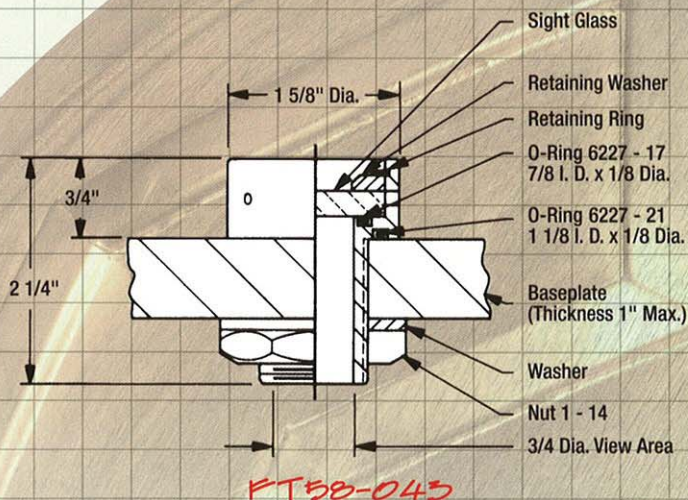
FT58-042 is for ion gauge or other 3/4" tubulation. It is commonly used for mounting the ion gauge, such as the CHA IG-100 series, for pressure measurements within the chamber. Other sizes available on special request. Body is stainless steel.



## FT58-043

### Sight port

FT58-043 is for optical transmission and measurements within the chamber. O-ring mounting of the sight port permits use, or interchange, of different types of window material. The standard unit is supplied with an optically flat Pyrex window.



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