



Humidity Indicator & Desiccator Plugs

Purpose

Humidity indicator plugs are designed to indicate the relative humidity level within a sealed container without users having to open it. Desiccator plugs both indicate and control humidity levels within the container.

What are they?

Humidity indicator plugs work much like humidity indicator cards but can be screwed into the outside walls of sealed containers. Made of aluminum, brass or stainless steel, they feature large, clear viewing windows for easy reading of humidity levels within the container. In the case of desiccator plugs, a desiccant tube extends from the indicator into the container to keep products dry.

Why use them?

Sensitive goods are often housed in containers that either should not or can not be opened until use. By installing humidity indicator or desiccator plugs into the walls of these containers, users can ensure that goods are housed at safe humidity levels without exposing them to external elements while humidity levels are checked.

Available configurations

Süd-Chemie's humidity indicator and desiccator plugs are available in a variety of sizes and configurations, detecting anywhere from 5 to 95 percent relative humidity. Plugs are compatible with rigid-wall equipment and electrical housings, as well as most flexible barriers. Desiccator plugs are primarily designed for small containers, mechanical boxes or sealed instruments where space is limited.

Plugs are adaptable to virtually all applications for Method II packaging of Mil-Std-2073-1D Method 50 and AS26860 aerospace specifications. Compact plugs are designed to be leak-resistant and temperature-proof, and to withstand shock and vibration.

Usage Requirements

Mount Süd-Chemie's humidity indicator plugs internally on flexible barriers, plastic and fiber bags, rigid equipment, electrical housing and other humidity-controlled spaces.

Indicators are reversible and fluctuate with current relative humidity levels. Indicators are accurate within 5 percent when read at 75°F.

Storage and Handling

- ▶ Store plugs in their original shipping container until ready for installation.
- ▶ Do not put indicators in direct contact with water or steam, as they are water-soluble. Ammonia gases will also damage indicators.

(Turn over for full product descriptions)



With humidity indicator plugs, users can visually inspect the humidity inside a sealed container without opening it.



Desiccator plugs, including porous desiccator attachments, both monitor and control the humidity levels within a sealed container.

Typical applications

- ✓ Military
- ✓ Radar instrumentation
- ✓ Night vision instrumentation
- ✓ Aerospace
- ✓ Metals
- ✓ Transportation systems
- ✓ Hydraulic systems
- ✓ Electronic equipment

SÜD-CHEMIE
Creating Performance Technology



Süd-Chemie, Inc.
Performance Packaging Business Unit
926 South 8th Street
PO Box 610
Colton, CA 92324
Tel: 909-825-1793; 800-966-1793
Fax: 909-825-6671
Web: www.s-cpp.com; E-mail: info@s-cpp.com



Humidity Indicator & Desiccator Plugs

Available configurations

Label and Application	Material Finish	Finish	Thread Size	Max. Internal Pressure	Meets Specs:
2156, 2161, 2157 HI Plugs 2156: For installation in flexible barriers, rigid containers or threaded boss; 2157: For installation in containers with thick walls; 2161: For installations where space is limited.	Aluminum QQ-A-225/5 or /6	Clear anodized	¾" - 14 Modified straight pipe	10 PSI	Mil-Std-2073-1D Method 50, AS26860
2155 HI Plugs For installation in rigid barriers.	Brass QQ-B-626	Zinc plate	¾" - 14 Modified straight pipe	10 PSI	Mil-Std-2073-1D Method 50, AS26860
R2156 HI Plugs For installation in flexible barriers.	Aluminum QQ-A-225/5 or /6	Clear anodized	¾" - 14 Modified straight pipe	10 PSI	Mil-Std-2073-1D Method 50, AS26860
2175 HI Plug For installation in rigid containers or flexible barriers.	Aluminum QQ-A-225/5 or /6	Clear anodized	1.4375" - 18 UNEF	10 PSI	Mil-Std-2073-1D Method 50, AS26860
2175R HI Plug For installation in rigid barriers.	Aluminum QQ-A-225/5 or /6	Clear anodized	1.4375" - 18 UNEF	10 PSI	Mil-Std-2073-1D Method 50, AS26860
SK412, SK413 HI Plugs Designed for installation in the threaded boss of shipping containers, storage cabinets and equipment housings that require a smaller indicator plug.	Brass QQ-B-626	Zinc plate	½" - 20 UNEF	10 PSI	NA
2184 HI Plug For high pressure applications.	Stainless steel	Electroless nickel	¾" - 14 Tapered straight pipe	3,000 PSI	NA
2156-DA1, 2156-DA2 Desiccator Plug Designed primarily for use in small containers or sealed instruments. Desiccant is refillable.	Aluminum QQ-A-225/5 or /6	Clear anodized	¾" - 14 Modified straight pipe	10 PSI	NA
680000 Desiccator Plug Effective for small containers up to 250 cubic inches in volume. Ideal for use in containers or equipment cabinets of one gallon or less. Contains approx. 3 grams of silica gel.	Aluminum QQ-A-225/5 or /6	Black anodized	18 mm - 1.5	NA	Mil-Std-2073-1D Method 50
680300 Desiccator Plug Initially designed for missile container protection. Effective for small containers up to 500 cubic inches in volume. Contains approx. 7 grams of silica gel.	Aluminum QQ-A-225/5 or /6	Black anodized	1" - 14 UNS	NA	Mil-Std-2073-1D Method 50
2156/2161 PDA Porous Desiccator Attachment Porous polyethylene tube filled with desiccant.	Aluminum QQ-A-225/5 or /6	Clear anodized	¾" - 14 Straight pipe	N/A	N/A
2175 PDA Porous Desiccator Attachment Porous polyethylene tube filled with desiccant.	Aluminum QQ-A-225/5 or /6	Clear anodized	1.4375"-18 UNEF	N/A	N/A



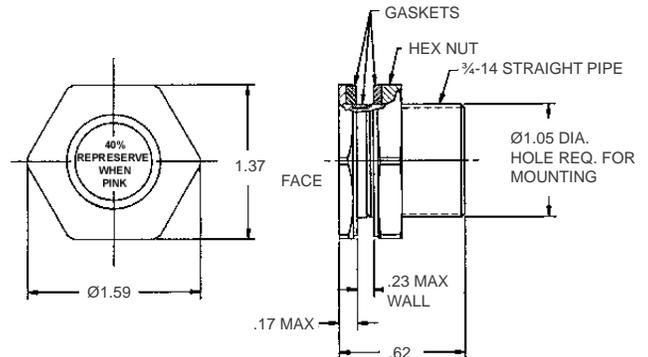
Humidity Indicator Plugs

Available configurations



2156 Humidity Indicator Plug

The 2156 can be installed in a flexible barrier through a 1.05" diameter hole. A locknut and two gaskets are furnished. The 2156 may also be installed in a rigid container through a 1.05" diameter hole by using only one gasket and reversing the locknut. The 2156 can be installed in a 3/4"-14 pipe threaded boss.



2157 Humidity Indicator Plug

The 2157 is the same as 2156, except it has a 1.125" length, instead of 0.62" length, to allow for installation in containers with thick walls.

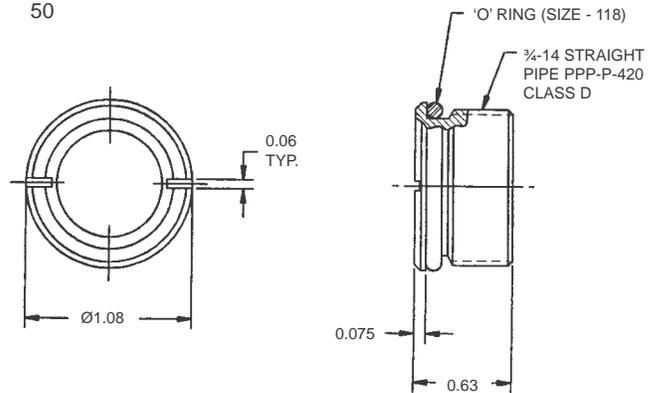
2156/2157 Humidity Indicator Plugs

Material: Aluminum QQ-A-225/5 or /6
Finish: Clear anodized
Thread size: 3/4"-14 Straight pipe
Max. Internal Pressure: 10 PSI
Military Specifications: AS26860
 Type II and Mil-STD-2073-1D Method 50



2161 Humidity Indicator Plug

The 2161 is similar to the 2156, except it has a round face and O-ring seal for limited space installations. It does not include a locknut.



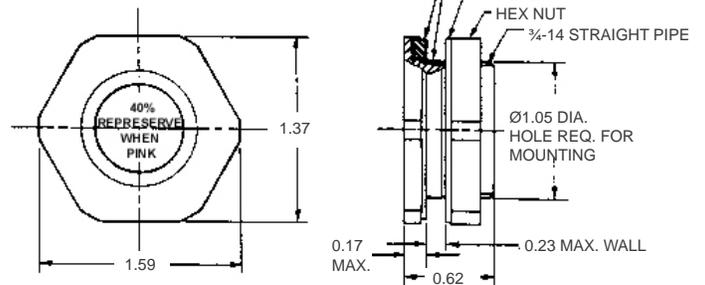
2161 Humidity Indicator Plug

Material: Aluminum QQ-A-225/5 or /6
Finish: Clear anodized
Thread size: 3/4"-14 Straight pipe
Max. Internal Pressure: 10 PSI
Military Specifications: AS26860
 Type II and Mil-STD-2073-1D Method 50



2155 Humidity Indicator Plug

The 2155 can be installed in a rigid container through a 1.05" diameter hole. Locknut, gasket and retaining ring are furnished. It can also be installed in a rigid container, through a 3/4"-14 straight pipe threaded boss, by eliminating the retaining ring and the locknut.



2155 Humidity Indicator Plug

Material: Brass QQ-B-626
Finish: Zinc plate
Thread size: 3/4"-14 Straight pipe
Max. Internal Pressure: 10 PSI
Military Specifications: AS26860
 as applicable and Mil-STD-2073-1D Method 50



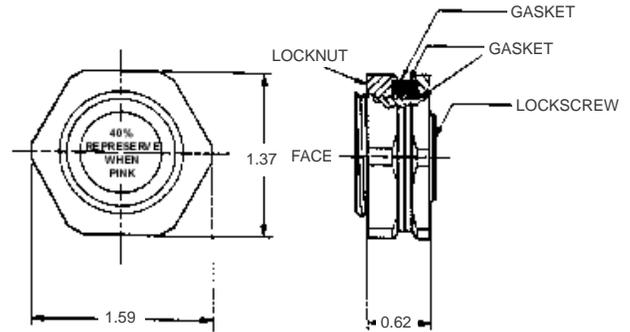
Humidity Indicator Plugs

Available configurations



R2156 Humidity Indicator Plug

The R2156 is specifically designed for flexible barriers. It has all the features of the 2156, but by reversing its viewing face, it is easier to install. It provides the same tight seal through a 1.05" diameter hole. Locknut and two gaskets are included.



R2156 Humidity Indicator Plugs

Material: Aluminum QQ-A-225/5 or /6

Finish: Clear anodized

Thread size: 3/4"-14 Straight pipe

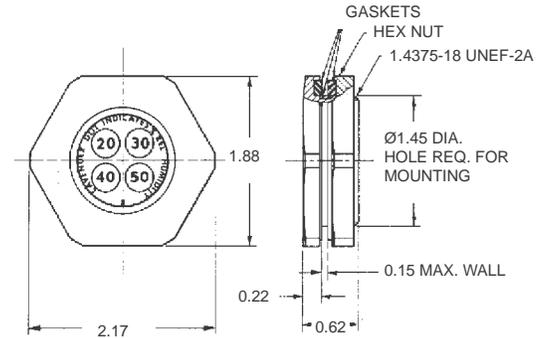
Max. Internal Pressure: 10 PSI

Military Specifications: AS26860 as applicable and Mil-STD-2073-1D Method 50



2175 Humidity Indicator Plug

The 2175 can be installed in a flexible barrier through a 1.45" diameter hole. Locknut and two gaskets are furnished. It may also be installed in a rigid container through a 1.45" diameter hole by using one gasket and reversing the locknut. By eliminating one of the gaskets and the locknut, the 2175 can be installed in a 1.4375"-18 UNEF threaded boss.



2175 Humidity Indicator Plugs

Material: Aluminum QQ-A-225/5 or /6

Finish: Clear anodized

Thread size: 1.4375"-18 UNEF

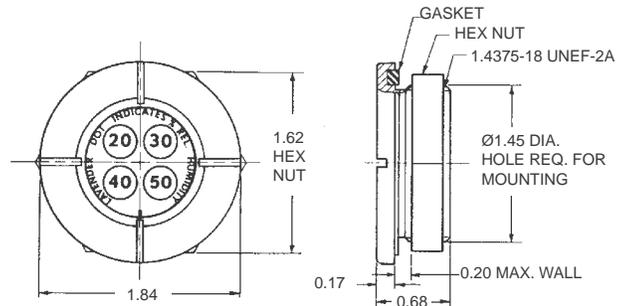
Max. Internal Pressure: 10 PSI

Military Specifications: AS26860 and Mil-STD-2073-1D Method 50



2175R Humidity Indicator Plug

The 2175R can be installed in a rigid barrier through a 1.45" diameter hole. Locknut and gasket are furnished. By using only one gasket the 2175R can be installed in a 1.4375"-18 UNEF threaded boss.



2175R Humidity Indicator Plugs

Material: Aluminum QQ-A-225/5 or /6

Finish: Clear anodized

Thread size: 1.4375"-18 UNEF

Max. Internal Pressure: 10 PSI

Military Specifications: AS26860 as applicable and Mil-STD-2073-1D Method 50



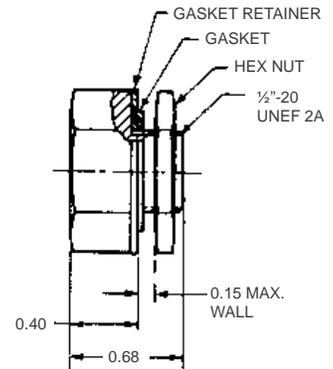
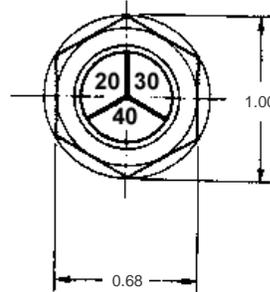
Humidity Indicator Plugs

Available configurations



SK412 Humidity Indicator Plug

The SK412 can be installed in shipping containers, storage cabinets and equipment housings that require a smaller indicator plug. The SK412 can be installed in a container through a 0.5 diameter hole. Locknut, gasket and retaining ring are furnished.



SK412 Humidity Indicator Plugs

Material: Brass QQ-B-626

Finish: Zinc plate

Thread size: 1/2"-20 UNEF

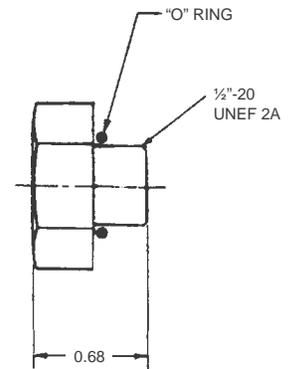
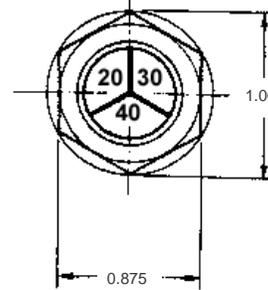
Max. Internal Pressure: 10 PSI

Military Specifications: MS 18013-3 (SK412-234P only)



SK413 Humidity Indicator Plug

The SK413 is installed in a 1/2"-20 UNEF threaded boss. The SK413 O-ring provides an airtight seal with minimum torque.



SK413 Humidity Indicator Plugs

Material: Brass QQ-B-626

Finish: Zinc plate

Thread size: 1/2"-20 UNEF

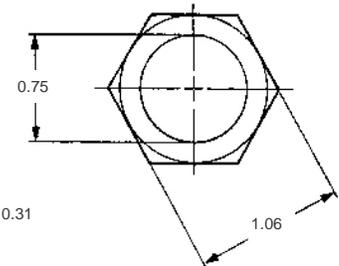
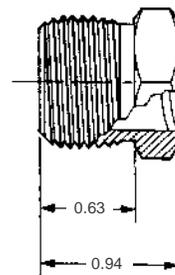
Max. Internal Pressure: 10 PSI

Military Specifications: MS 18013-3 as applicable (SK412-234P only)



2184 Humidity Indicator Plug

The 2184 was created for high pressure applications. The glass window is fused directly to the steel body, and the 3/4"-14 pipe thread is tapered for leak-tight installations without O-rings or gaskets. The 2184 is easily installed in a threaded boss with a 1 1/8" socket wrench. The indicator plug is protected from contamination by a porous filter and polyethylene spacer. The humidity indicator card, filter and spacer are held in place by a retaining ring. Locknuts and gaskets are not supplied. It is designed for threaded boss only.



SK412 Humidity Indicator Plugs

Material: Stainless steel

Finish: Electroless nickel

Thread size: 3/4"-14 Tapered pipe

Max. Internal Pressure: 3,000 PSI



Desiccator Plugs

Available configurations

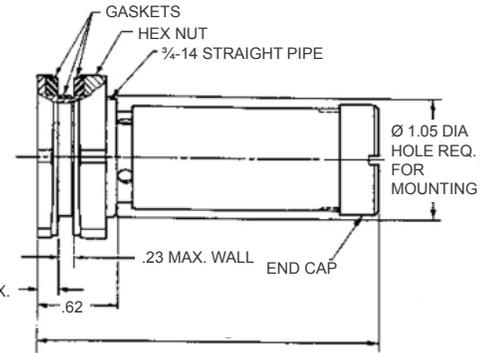
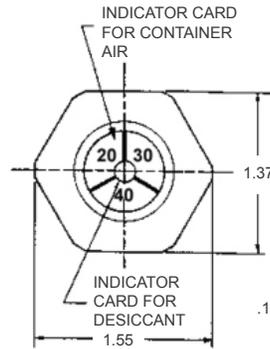


2156-DA1/2156-DA2 Desiccator Plugs

The 2156-DA1 utilizes the 2156 humidity indicator plug and a metal desiccator attachment for a compact, multi-purpose device. It incorporates

two separate humidity indicator elements. One element monitors the relative humidity of the container's atmosphere, while the other small center spot indicates the condition of the desiccant itself. This unit is refillable by removing the end cap. It is available with a variety of desiccants and indicator elements. The desiccator attachment protrudes approximately 1¼" into the container and contains approximately 6½ grams of desiccant. It is designed primarily for use in small containers or sealed instruments.

The 2156-DA2 is identical to the 2156-DA1 except it has a dehydrator tube that extends 3⅝" into the container and contains approximately 16½ grams of desiccant.



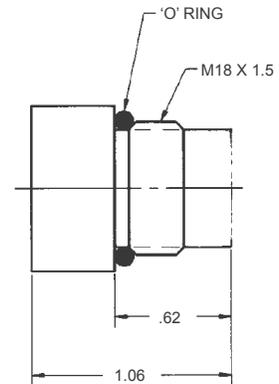
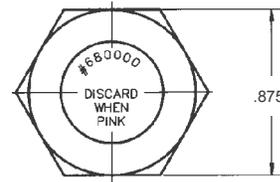
Material: Aluminum QQ-A-225/5 or /6
Finish: Clear anodized
Thread size: ¾"-14 Straight pipe
Maximum internal pressure: 10 PSI



680000 Desiccator Plug

The 680000 is Süd-Chemie's smallest desiccator plug. It will withstand a temperature range of -65°C to +85°C and 50 hours of salt spray-simulated harsh environmental conditions

per QQM-MI-51A without corrosion of base material. The desiccator plug is installed through an 18mm-1½ threaded boss using an O-ring seal. It contains approximately 3 grams of silica gel desiccant. The indicator card is a 20 percent relative humidity card with the wording "Discard When Pink." The 680000 is an effective desiccator for small containers up to 250 cubic inches in volume. It is ideal for use in containers or equipment cabinets of one gallon or less.



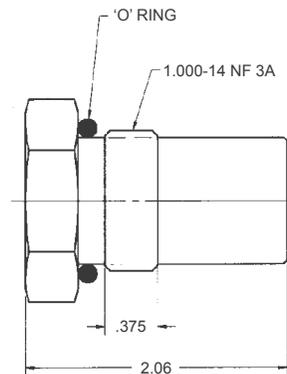
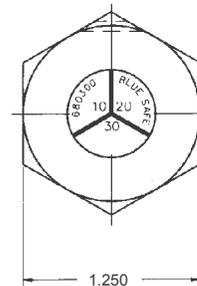
Material: Aluminum QQ-A-225/5 or /6
Finish: Black anodized
Thread size: 18mm-1.5
Maximum internal pressure: NA
Military specifications: NA



680300 Desiccator Plug

The 680300 desiccator plug was initially designed for missile container protection. The desiccator plug is filled with approximately 7 grams of silica gel. The plug may be installed in a 1-14

UNEF threaded boss using its O-ring seal. The standard is supplied without wiring holes, but wiring holes are available at an additional charge (please specify when ordering). It is an effective desiccator for small containers up to 500 cubic inches in volume.



Material: Aluminum QQ-A-225/5 or /6
Finish: Black anodized
Thread size: 1-14 UNEF
Maximum internal pressure: NA
Military specifications: NA



Observation Windows

Available configurations

Mounted through a container or wall, observation windows allow for continuous viewing of the interior of a sealed container without the need to open it for inspection. By monitoring the contents of a rigid container or barrier bag through an observation window, the need to expose the contents to moisture and other external contaminants by opening the container or bag is eliminated. Observation windows install onto the side of rigid or flexible containers using common hand tools. They are commonly used by the military and aerospace industries.

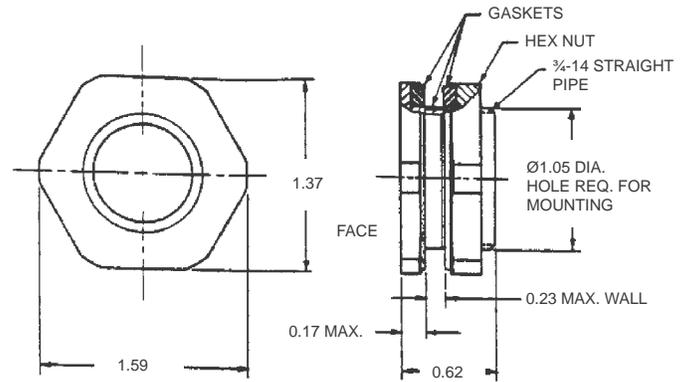


Observation windows are available in standard and large sizes:



2156OW Observation Window

A locknut and two gaskets are furnished with both the 2156OW and 2155OW. By eliminating the gasket, washer and one locknut, these viewing ports may be installed in a 3/4"-14 straight pipe threaded boss.



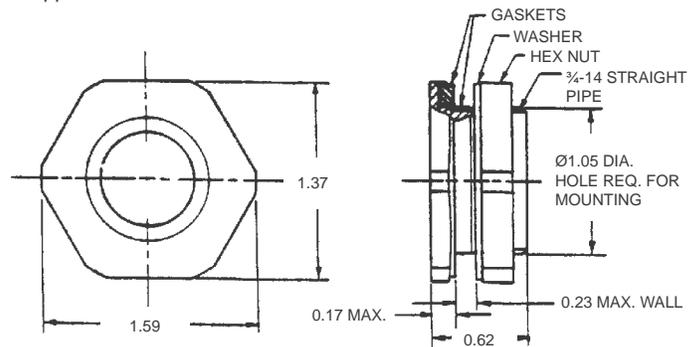
2156OW Observation Window

Material: Aluminum QQ-A-225/5 or /6
Finish: Clear anodized
Thread size: 3/4"-14 Straight pipe
Max. Internal Pressure: 10 PSI
Military Specifications: AS26860, as applicable



2155OW Observation Window

The 2155OW is furnished with one gasket, one washer and one locknut. By eliminating the washer and locknut, the 2155OW can be installed in a 3/4"-14 straight pipe threaded boss.



2155OW Observation Window

Material: Brass QQ-B-626
Finish: Zinc plate
Thread size: 3/4"-14 Straight pipe
Max. Internal Pressure: 10 PSI
Military Specifications: AS26860, as applicable



Observation Windows

Available configurations



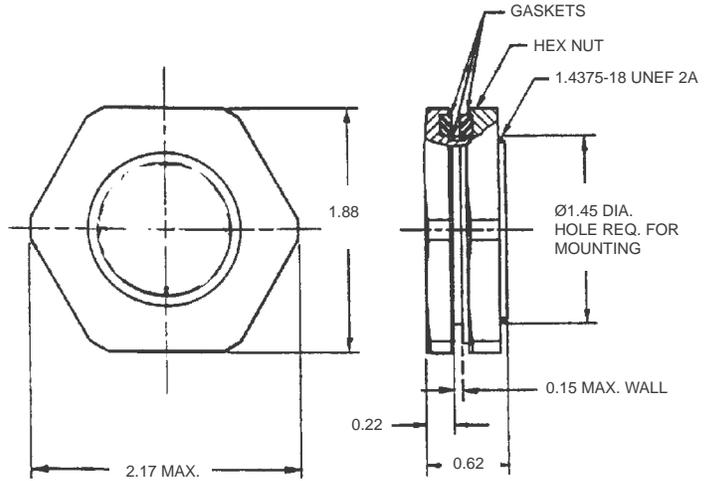
2175OW



2175ROW

2175OW and 2175ROW Observation Windows

The 2175OW and 2175ROW observation windows provide a larger viewing window. These windows are ideal for flexible barriers or rigid containers and can be installed in a rigid barrier through a 1.45" diameter hole. A locknut and two gaskets are furnished (one gasket with 2175ROW). By eliminating one of the gaskets and the locknut, these view ports can be installed in a 1.4375-18 UNEF threaded boss.



2175OW Observation Window

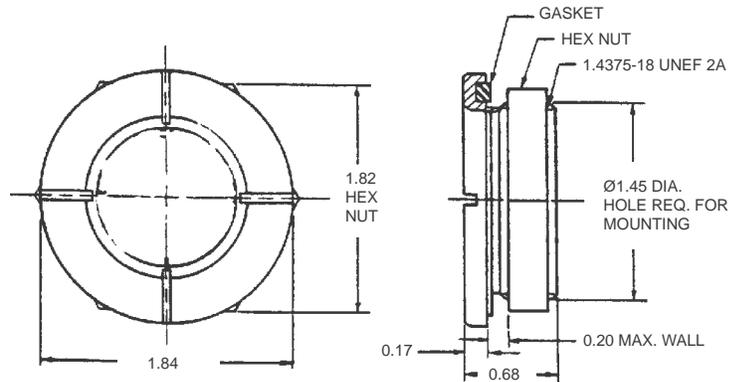
Material: Aluminum QQ-A-225/5 or /6

Finish: Clear anodized

Thread size: 1.4375-18 UNEF

Max. Internal Pressure: 10 PSI

Military Specifications: AS26860, as applicable



2175ROW Observation Window

Material: Aluminum QQ-A-225/5 or /6

Finish: Clear anodized

Thread size: 1.4375-18 UNEF

Max. Internal Pressure: 10 PSI

Military Specifications: AS26860, as applicable



Porous Desiccator Attachment

Available configurations

Porous Desiccator Attachment

Porous desiccator attachments can be combined with humidity indicator plugs to dry the inside of a container. The advantage of this application is the ability to customize the length of the porous polyethylene tube to accommodate a container's desiccant needs. Moisture is adsorbed around the entire length of the porous tube, allowing for fast reduction of humidity within the container.

Available configurations

Small PDA (2156/2161 PDA)

The small porous desiccator attachment combines with 2156 or 2161 humidity indicator plugs. A locknut and two gaskets are furnished for installation through a 1.05" diameter hole in the container. By eliminating one of the gaskets and the locknut, it can also be installed in a ¾"-14 straight pipe threaded boss. **Each inch of the porous tube contains 9 grams of desiccant (silica gel, unless otherwise specified).** Tube width is .95", and tube length is customizable.

Large PDA (2175 PDA)

The large porous desiccator attachment is a larger version of the 2156 PDA. A locknut and two gaskets are furnished for installation through a 1.45" diameter hole. It can also be installed in a 1.4375"-18 UNEF threaded boss. Each inch of the porous tube contains 12 grams of desiccant (silica gel, unless otherwise specified). The 2175 PDA can be combined with the 2175 or 2175R humidity indicator plugs. Tube length is customizable.



2156/2161 PDA & 2175 PDA

Material: Porous polyethylene

Adapter/Plug: Aluminum QQ-A-225/5 or /6

Finish: Clear anodized

Thread size: ¾"-14 Straight pipe (small)
1.4375"-18 UNEF (large)

Max. Internal Pressure: NA