Pass Wall Transfer Port

Installation Guide

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Introduction

The Romynox Pass Wall Transfer Port is a simple, though effective way to make transfer possible between two (clean) rooms. In this way you can move large volumes of liquids without the risk of bin breakage or spillage during bin transfer.

The base system consist of a stainless steel portal with tri-clamp connections on both sides, which can be modular extended with:

- The Romynox 8-I series Iris valves are specially designed as a transfer-port solution, to make transfer possible between two clean rooms in combination with our Mousehole. The lightweight pharma approved valve body is made of FDA approved plastic POM material, with an airtight Iris made of FDA approved white EPDM. The Iris is easy to lock in various positions.

This can be done on one or both sides to give you the connections needed.

Standard sizes are 2" - 6". Other size are on request.

Components

The Pass Wall Transfer Port consists of several components that create the portal assembly. Some of your components may appear different than what is shown below:
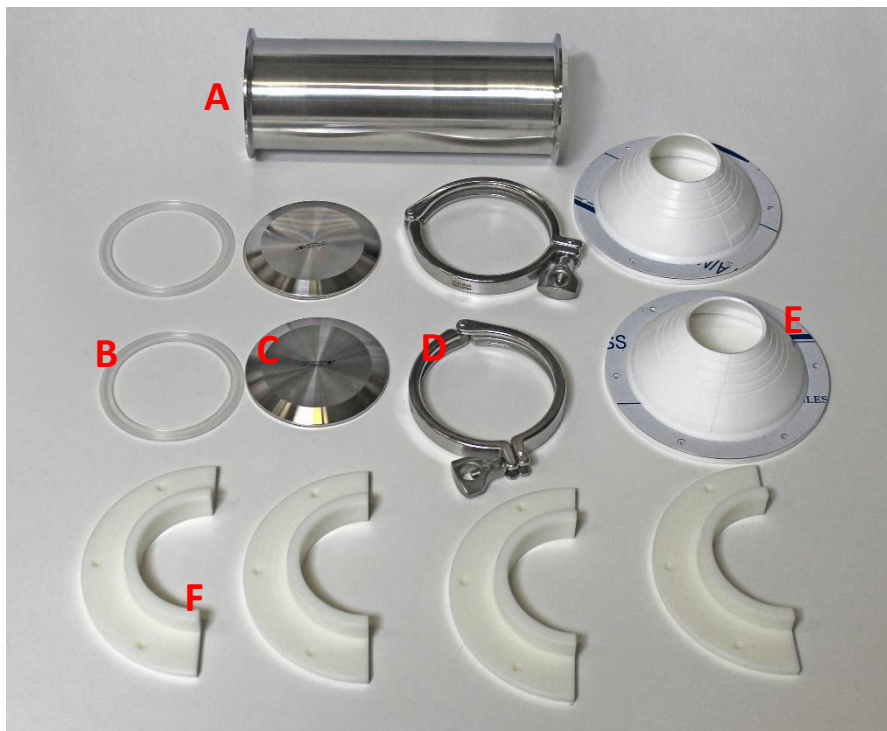
A: Portal

B: Sanitairy Gaskets (2x)
    Type A Flanged

C: Solid End Caps (2x)

D: Sanitairy Clamps (2x)

E: Pipetites (2x)

F: Support Rings (4x)

Specification

Dimensions	Portal size	2" (50.8mm)	4" (101.6mm)	6" (152.4mm)	8" (203.2mm)	12" (304.8mm)
	Inside Diameter	1.87" (47.5mm)	3.83" (97.3mm)	5.75" (146.1mm)	7.75" (196.9mm)	11.75" (298.5mm)
	Flange Diameter	2.52" (64mm)	4.68" (119mm)	6.57" (167mm)	8.60" (217mm)	12.70" (319mm)
	Bolt Holes	4 @ .177" Ø	6 @ .177" Ø	10 @ .177" Ø	14 @ .177" Ø	20 @ .177" Ø
	Wall Projection	3.12" (79.2mm)	3.12" (79.2mm)	3.12" (79.2mm)	3.12" (79.2mm)	3.12" (79.2mm)

Minimum Wall/Floor Thickness	Standard from 2½" (L280) or 5" (L380). Custom on request.
Maximum Wall/Floor Thickness	Standard up to 5" (L280) or 10" (L380). Custom on request.

Materials	Portals	Stainless Steel 316L
	End Caps	Stainless Steel 316L
	Isolating Gaskets	Platinum Cured Silicone
	Clamps	Stainless Steel 304L
	Pipetites	Silicone with Stainless Steel Ring
	Support Rings	Nylon

Surface Finish	30Ra Micro-inches / Ra < 0,8 µm
Passivation	All surfaces

Preperation

Prior to installation, locate on the wall the position of your Pass Wall Transfer Port using the dimension table, below. We recommend positioning the portal 36" above the finished floor and at least 12" from an inside corner.

Portal Size	2" (50.8mm)	4" (101.6mm)	6" (152.4mm)	8" (203.2mm)	12" (304.8mm)
Height	24" to 40" (60 – 102cm)	24" to 40" (60 – 102cm)	24" to 40" (60 – 102cm)	24" to 40" (60 – 102cm)	24" to 40" (60 – 102cm)
Spacing	6.17" (156.7mm)	9.36" (237.7mm)	11.33" (287.8mm)	14.5" (368.3mm)	20.5" (520.7mm)
Bore Size	2.55" (64.8mm)	4.70" (122mm)	6.60" (167.6mm)	8.65" (219.7mm)	12.75" (323.9)
Pipetite Flange Diam.	4.17" (105.9mm)	7.36" (186.9mm)	9.33" (237.0mm)	13.28" (337.3mm)	22.5" (571.5mm)
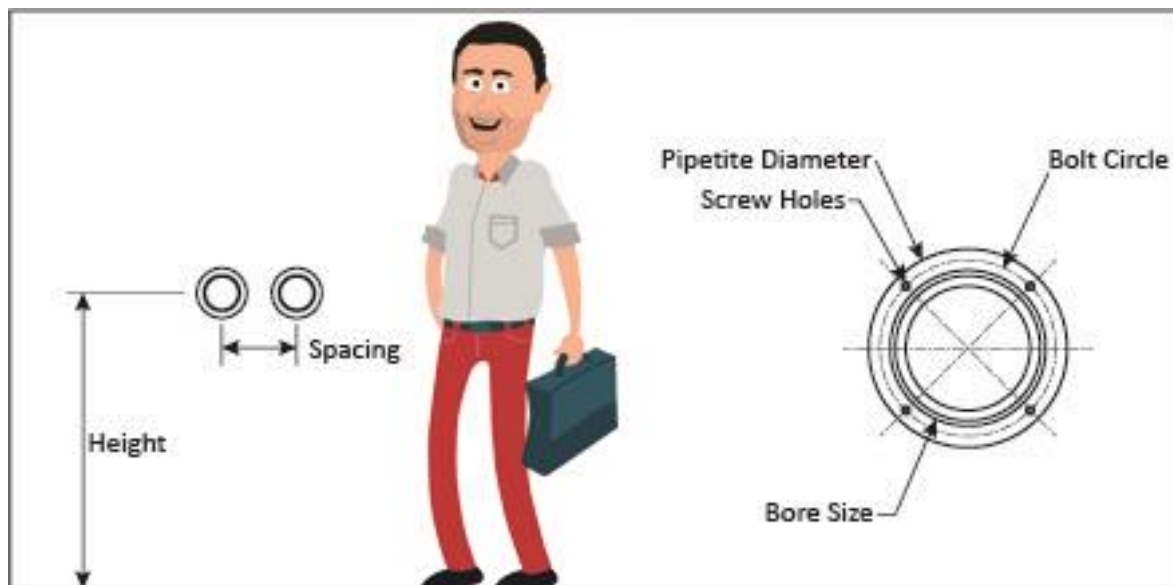
Next, bore a hole in the wall or floor according to the Bore Size in the dimension table for your portal size. This will allow the portal to pass cleanly through the wall.

Do not make the wall or floor bore oversize, otherwise, the mounting screws or wall anchors may not have sufficient material to support the weight of the portal assembly.

If cutting through multiple walls, we suggest drilling a ½" diameter pilot hole through all of the walls, floors or partitions, then insert a sufficiently long enough solid steel dowel or pipe through and check that both ends are parallel to the finished floor.

We recommend using 316 stainless steel mounting screws to avoid galvanic corrosion between the portal flange and the mounting screw head. Select a mounting screw that is appropriate for your particular wall material. If the mount screw is not available in 316 grade, insert a nylon or similar plastic washer between the screw head and the portal flange.

All wall and floor mounting screws should have a minimum load rating of 100 pounds

Installation

Prepare hole according to preparation.

Insert the portal so that it is centered horizontal in relation to the wall.
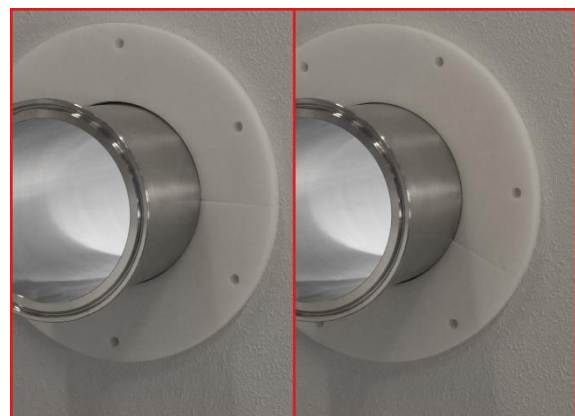

Insert support ring halves into gap between portal and wall.

Make sure that the support rings are placed thight and horizontal.

In the case of a thin wall, rotate the support rings on the other side of the wall.

Cut of the Pipetite at the right indicated line and install the Pipetite with base towards the wall.

Predrill holes through the Pipetite base and support ring. Screw appropriate wall screws through pre-drilled holes into wall material. We recommend using 316 stainless steel mounting screws to avoid galvanic corrosion between the portal flange and the mounting screw head. Select a mounting screw that is appropriate for your particular wall material. If the mount screw is not available in 316 grade, insert a nylon or similar plastic washer between the screw head and the portal flange.

Repeat for other side of portal. In the case of a thin wall, rotate the support rings with respect to the other side.
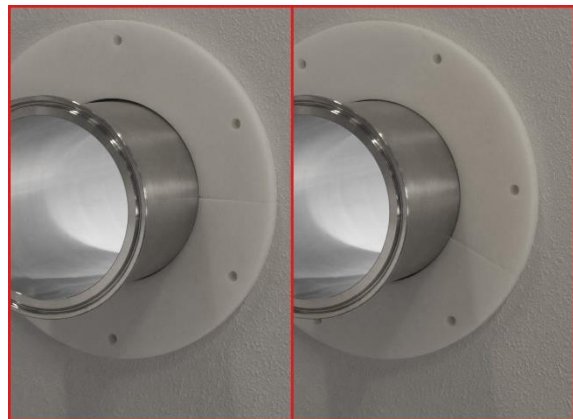
To complete the installation, apply a very small (<1/8") bead of clear silicone sealant to the perimeter of the support ring. This will seal the assembly to the wall and address any gaps between the wall material and the support ring.

Now you can use the Pass Wall Transfer Port.

Maintenance

The Pass Wall Transfer Port is a static device that has been designed to provide years of service with no maintenance.

We also recommend replacing the silicone sealant found along the perimeter of the support ring every two (2) to three (3) years in accordance with your routine sealant replacement practice.

Options

Besides the module mentioned in the introduction (Iris Diaphragm Valve), we can deliver tailor-made End Caps to fit your hoses.

Pass Wall Transfer Port as a Positive Barrier

The following pages will detail the logic, general theory, and specific steps for using the Pass Wall Transfer Port as a positive barrier between rooms. For the example below two rooms, one that is Class D and one that is Class C are used. To accomplice this you need the type with Purge Ports, these are not standard.

Portal Set Up

Solid isolator seal and solid end cap installed on both sides of portal.

Air valve/regulator installed at purge port A and supplied with 5 psi (0,34 bar) oil-less filtered air.

Note: Regulator should be open at all times to maintain the pressure and provide a positive barrier between rooms even when not in use.
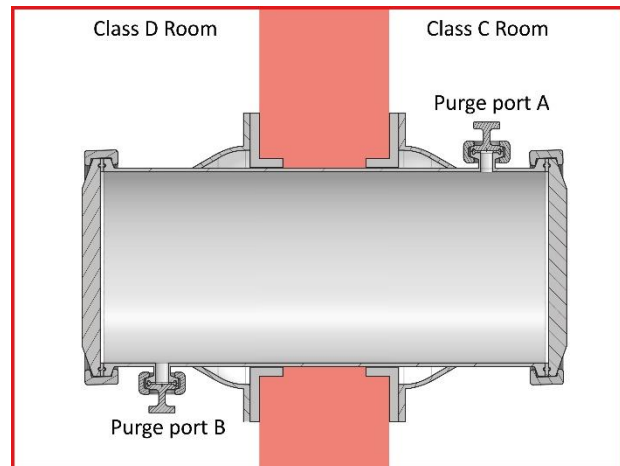
One way check valve or hand valve in open position installed at purge port B. Exhaust line ran to exit Class D room through a vent or sterilizing filter.

Hose Installation

In Class C room, remove solid end cap and solid isolator seal.

Install the Hose and install welded split end cap or iris valve.

Note: The air from the Class C room that entered the portal is now flushed through purge port B. The air purge will occur within 15 seconds to one minute depending on the standard portal size.

Go to Class D room. Remove solid end cap and install the Hose with welded split end cap or iris valve.

Note: The air from the Class D room that entered the portal is now flushed through purge port B. The air purge will occur within one minute as calculated for the 6" diameter standard portal size.

The Pass Wall Transfer Port is now pressurized and at a higher pressure than either room. No air from either room can enter the Pass Wall Transfer Port.

The silicone isolator seal is not 100% air tight. This is evident by the AdvantaPass pressure decay protocol testing that was performed. Using the set up and operation above only filtered air will migrate through the isolator seal. This is due to the pressure being higher in the AdvantaPass portal than the ambient pressure of either room.