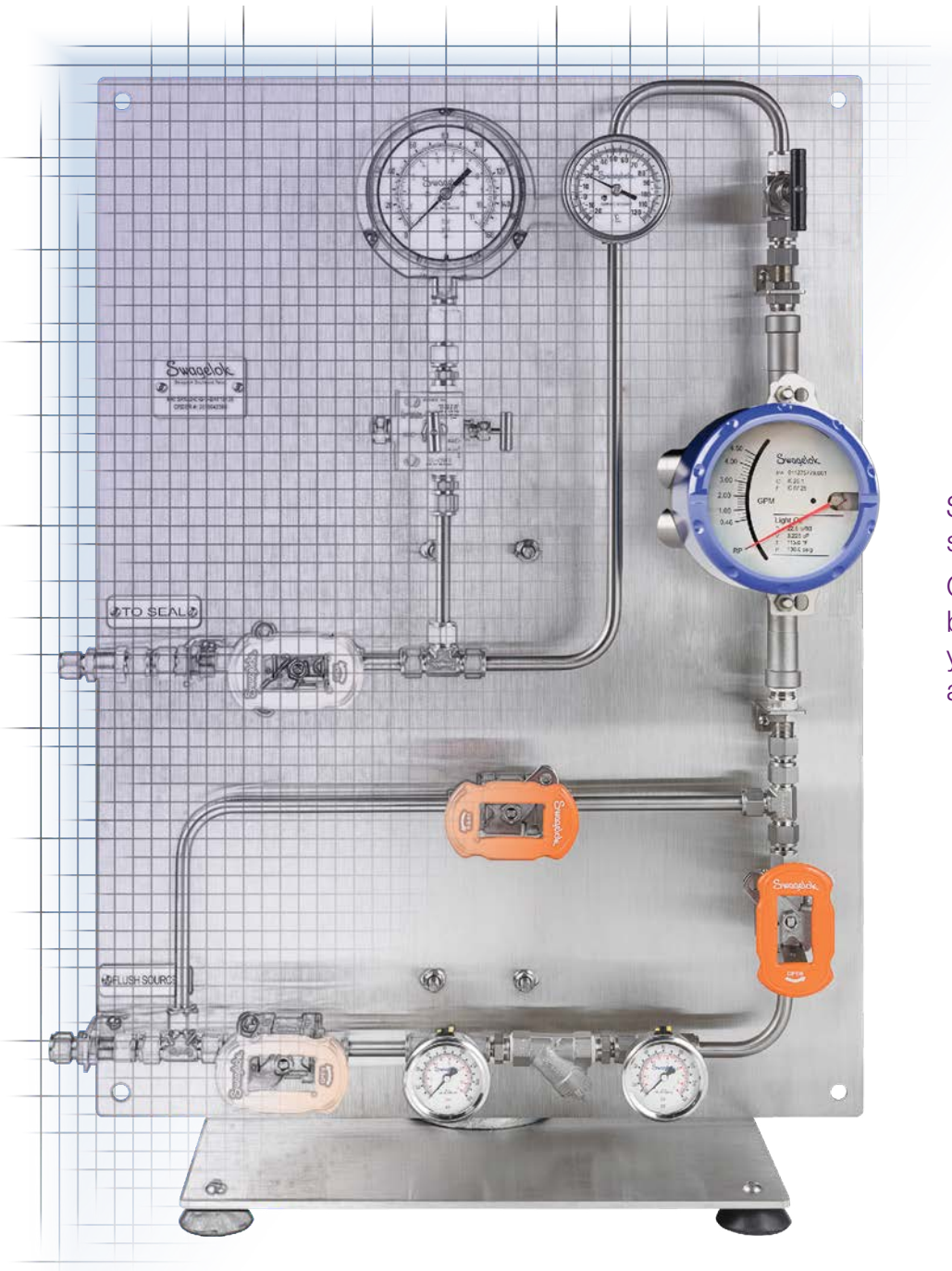


# Mechanical Seal Support Systems

## API 682 Seal Plans



Swagelok® seal support systems are better by design. Our easy-to-configure, locally built, and reliable solutions help you reduce costs, save time, and improve safety.

Configurable. Local. Reliable.

Swagelok

## Better by Design Save Money. Reduce Labor. Improve Safety.

Proper system start-up and commissioning are critical for the operation of mechanical seals and their associated support systems. Swagelok's seal support systems are built with the Swagelok components you trust, like thermowell tees that reduce threaded connections where costly leaks can occur.

Our mechanical seal support systems are designed to simplify assembly and maintenance, maximizing your uptime while saving on labor costs. Each system's ergonomic, intuitive design helps minimize the potential for operator errors, asset damage, and leaks that cost you time and money.

With more than 70 years of fluid system expertise, we understand demanding applications. To help you focus on what you do best, we test our products to be leak-tight and free from manufacturing defects. And we back our products with our Limited Lifetime Warranty.

### Seal Plan Kits and Assemblies

#### Seal Plan Kits

Seal plan kits are a collection of components that are used to help ensure the support system is properly installed or connected to the pump. Some API plans are detailed only as a kit of components that are ready for field installation due to the simplicity of the arrangements.

#### Seal Plan Assemblies

Seal plan assemblies are panels, seal pots, or skid systems that comprise most of the API seal support plans. The seal plan assembly ordering and numbering structure allows users to select a variety of configurations and additional system components to meet specific site or application requirements.

### Guided by API 682: Pumps—Shaft Sealing Systems for Centrifugal and Rotary Pumps

Based on API 682<sup>1</sup> fourth edition standards, Swagelok seal support system designs avoid pipe threads and limit the number of connections wherever possible. The standard design for each plan includes the minimum arrangement of components as detailed in API 682.

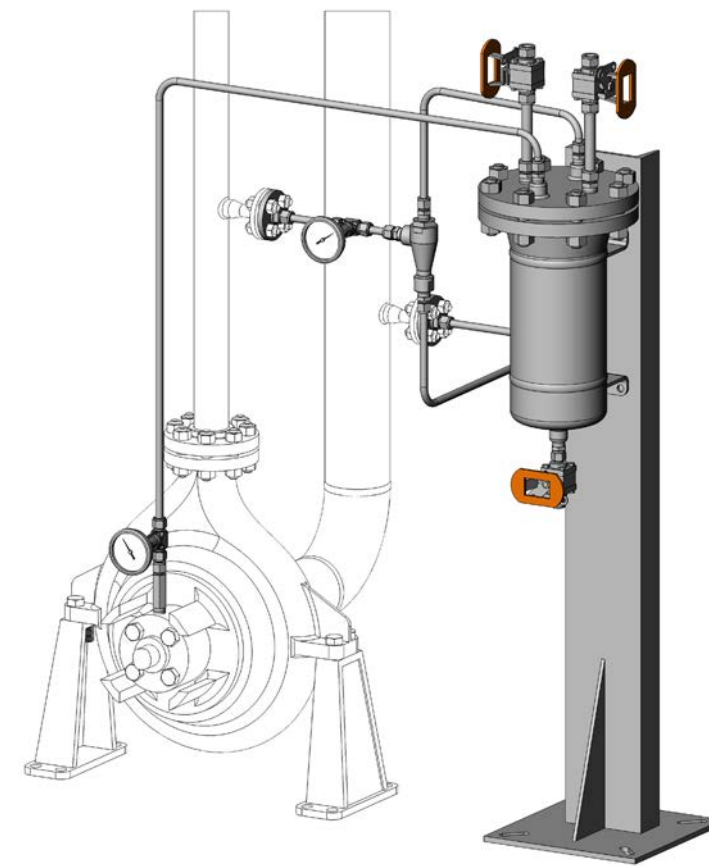
<sup>1</sup> API Standard 682: Pumps—Shaft Sealing Systems for Centrifugal and Rotary Pumps, fourth edition, May 2014.



## Configurable Save Money. Reduce Labor. Improve Safety.

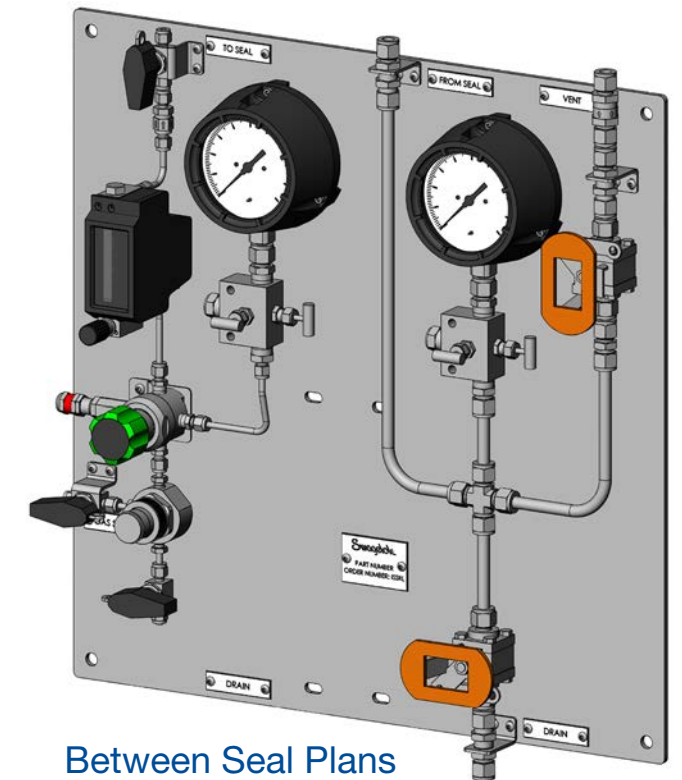
### Configurable Plans

All our seal support plans are designed using API 682-recommended best practices. Combined with Swagelok's fluid systems expertise, each design can be customized to be easy to use, easy to maintain, and safe to operate.



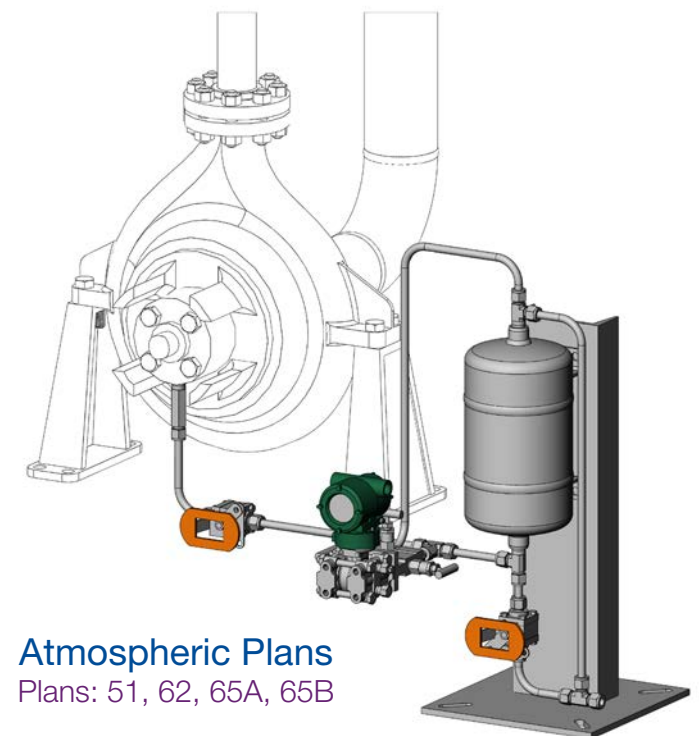
### Process Side Plans

Plans: 11, 12, 13, 14, 21, 22, 23, 31, 32, 41



### Between Seal Plans

Plans: 52, 53A, 53B, 53C, 54, 55, 72, 74, 75, 76, 72/76



### Atmospheric Plans

Plans: 51, 62, 65A, 65B



## Local Reduce Labor. Save Time.



Swagelok's local Custom Solutions capabilities help you source components and build mechanical seal support systems to meet your unique requirements. Each Swagelok technician undergoes a comprehensive training and certification program every three years to ensure your system is assembled to strict guidelines, providing you with reliable, consistent operation.

### We can help you with:

- Fabricating and assembling customized API 682 systems with components especially suited to your application
- Creating CAD drawings and piping and instrumentation diagrams (P&ID)
- Selecting components and generating bills of materials
- Welding, tube bending, and other services

## Reliable Save Money. Reduce Labor. Improve Safety.

Innovative use of components reduces threaded connections where leaks can occur.



**Integral Orifice Flange Adapter**  
Replace threaded or welded flange assemblies with a one-piece flange adapter with integral orifice.



**Thermowell Tee**  
Reduce threaded connections and monitor temperature with integrated thermowell pre-welded into tube fitting tee for ease of installation.



**Orifice Union**  
Easily add an orifice to a flush system with the orifice union. This fitting makes welding bulky flange assemblies unnecessary. Tagged for visual identification.



**Extended Male Connector**  
Eliminate threaded pipe and potential leak points with a single fitting. Available in 4-inch and 6-inch lengths to allow you to clear the shroud and go straight from the gland to your tubing run in one piece.