

## PSW

The Onyx Isolator Ring provides a simple, method to measure pressure of slurries and corrosive fluids. The PSW series is compatible with flanged pipe connections. Nesting inside the bolt circle of mating flanges provides accurate alignment and minimum weight at the lowest installed cost.

The inside diameter of the PSW precisely matches standard pipe for smooth, unobstructed flow, self-cleaning operation, and minimum turbulence and friction. Onyx ultra-deep vacuum filling insures the highest accuracy in the industry. The patented "Module Seal" - standard on all Onyx Isolator Rings - allows instruments to be or replaced or calibrated with minimum down time.

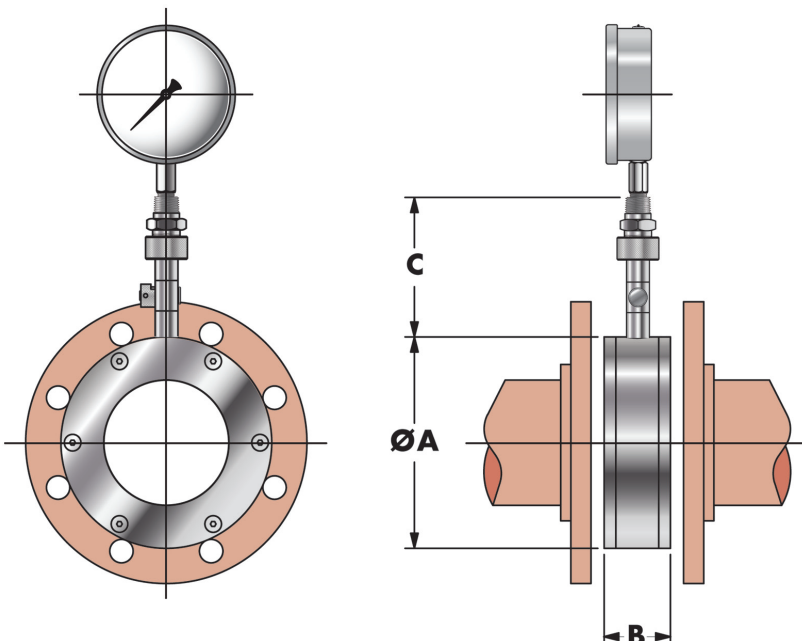
### Materials of Construction

Center Section:	Carbon Steel	Carbon-Kynar Coat	316 Stainless Steel
End Plates:	Acetal (Standard) 316 Stainless Steel Teflon	Kynar Titanium	UHMW-PE Carpenter-20
Elastomer: (Available with optional Teflon coatings)	Nitrile (Buna-N) EPDM* (Nordel*) Neoprene Viton Hypalon	-30°F → 220°F -40°F → 300°F -20°F → 220°F -15°F → 375°F -10°F → 250°F	
Fill Fluid:	Silicone Fluid Food Grade Silicone	-40°F → 400°F -20°F → 400°F	
Module Seal Stinger Fitting:	Brass	316 Stainless Steel	
Pipe Fittings:	Carbon Steel	316 Stainless Steel	
Pressure Range:	Vacuum to +1,000 psi	The Onyx Isolator ring has been tested by an independent lab to 1,500 psi.	



### Benefits:

- Absolute immunity to clogging
- Combines accurate alignment, reduced weight, and maximum economy
- Mates with 150# flanges, compatible with 300# or 600# flanges with adapters
- Superior accuracy compared to diaphragm seals
- No tools required to change pressure instrument
- High displacement design can operate up to three instruments on one ring



Size	ØA	B	C
1	2.50	1.87	4.50
1 ½	3.25	1.87	4.50
2	4.00	1.87	4.50
2 ½	4.75	1.87	4.50
3	5.25	1.87	4.50
4	6.75	2.12	4.50
5	7.62	2.25	4.50
6	8.62	2.25	4.50
8	10.87	2.25	4.50
10	13.25	2.81	4.50
12	16.00	3.12	4.50
14	17.62	3.12	4.50
16	20.12	3.12	4.50
18	21.50	3.12	5.37
20	23.75	3.12	5.37
24	28.12	3.12	5.37
28	32.62	3.12	5.37
30	34.62	3.12	5.37
36	41.12	4.00	5.37



## The New Onyx Isolator Ring

### Solves the Problem with Conventional Isolator Rings:

The problem: What if the pressure gauge, switch, or transmitter has to be repaired or replaced?

The instant you remove the instrument from the isolator ring you break the vacuum seal and air contaminates the fill fluid. Now you have to re-evacuate the isolator ring with a vacuum pump and recharge it with fresh oil after replacing the instrumentation. What this means in practical terms is that in order to replace the gauge (or switch or transmitter) you have to remove the entire isolator ring assembly from the process pipe and bring it to an instrument shop equipped with a vacuum pump.

This entails shutting down the process and draining the piping!

### The Onyx Solution:

The patented Onyx Isolator Ring provides the ultimate solution to this dilemma:

The Onyx Isolator Ring is equipped with an integral block valve and module seal.

The bottom half of the Module Seal consists of a ½" thick rubber membrane at the top of the mounting post. This provides a hermetic seal for the Isolator Ring keeping the instrument oil in and the air out.

The top half of the Module Seal is the "Stinger Fitting" a brass or stainless steel fitting with a needle projecting out of the bottom.

Replacing the gauge without compromising the integrity of the vacuum fill – and without removing the Isolator ring from the process pipe – is simple:

1. Close the Block Valve.
2. Unscrew the Lock Ring.
3. Pull the gauge and stinger fitting out as a complete unit.
4. Plug the new gauge and stinger assembly into the Module Seal.
5. Re-tighten the Lock Ring.
6. Open the Block Valve.



Block Valve in operating position and  
Block Valve in closed position

