DIAPHRAGM PRESSURE SEALS
TO ENSURE PROTECTION AND MEDIA COMPATIBILITY

Diaphragm seals, shown with PGH-45L-200, process gauge.

Seals

- **Protects Pressure Instrumentation from Corrosive or Viscous Fluids, Clogging, and In-Line Freezing of the Process Media**
- **Glycerine Fill Fluid is Standard, with Optional Fill Fluids Available**
- **Displacement of the Liquid Fill in the Pressure Seal Through Movement of the Diaphragm Transmits Process Pressure Directly to the Pressure Instrumentation**

OMEGA® diaphragm pressure seals protect sensitive pressure instrumentation from the damaging effects of corrosives, slurries, or viscous fluids. A variety of designs and styles is available to suit individual application requirements.

100 Series

Distinguished by its 3-part design, the 100 Series includes a PTFE coated diaphragm capsule that threads into the top housing, ensuring positive sealing at all surfaces and minimizing fluid leakage. The diaphragm capsule can be replaced without replacing the top housing. Continuous duty is assured; should the sensor be removed from the diaphragm seal, the process fluid is prevented from escaping. Easy cleaning and inspection of the diaphragm can be done during shutdown by detaching the top and bottom housings.

This design eliminates the need to refill the seal or recalibrate the instrument when the top and bottom housings are separated. A FKM O-ring, compatible with all standard fill fluids, and a PTFE backup ring, make a seal between the diaphragm capsule and the top housing. The diaphragm is PTFE coated to provide an integral gasket, thus ensuring a leakproof connection between the diaphragm and bottom housing. The 100 Series consists of a diaphragm capsule with a corrugated, metallic diaphragm edge welded to a sturdy backup plate that threads into the top housing. Once secured, the top housing can be bolted to the bottom housing. The bottom housing has a standard ½ NPT fitting that easily threads to the process piping.

102 Series

Virtually identical to the 100 Series in both performance and design, the 102 Series includes a standard #150 raised face flange in place of a threaded female NPT process fitting. For more rugged applications, an optional #300 raised face flange is also available.

202 Series

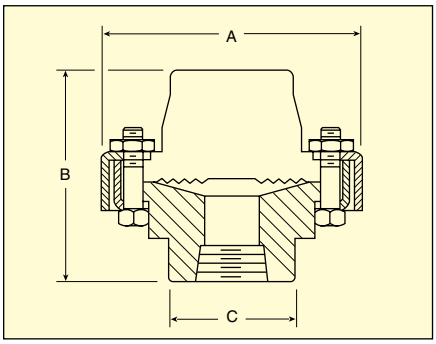
The 202 Series diaphragm seal features a bonded PTFE diaphragm and a PTFE #150 raised face flange. This all-PTFE wetted construction provides ruggedness and maximum corrosion resistance to acids, caustics, alkalis, ketones, hydrocarbons, and alcohols. In the new 202 design, the PTFE diaphragm is bonded to the top housing, allowing the top housing and instrument to be removed without losing the fill fluid.

OMEGA® diaphragm pressure seals are available for use with OMEGA® pressure instrumentation, for details visit us online.

- Pressure Transducers PX602, PX603, PX605, PX673, PX675
- Dial Pressure Gauges PGH, PGJ Series
- Pressure Switches PSW-300, PSW-370, PSW-400

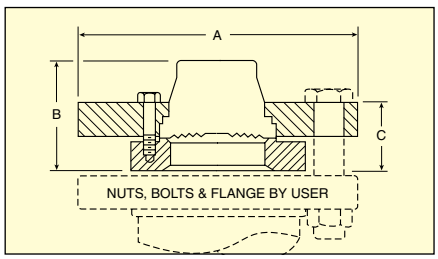
DIAPHRAGM PRESSURE SEALS TO ENSURE PROTECTION AND MEDIA COMPATIBILITY

100 Series



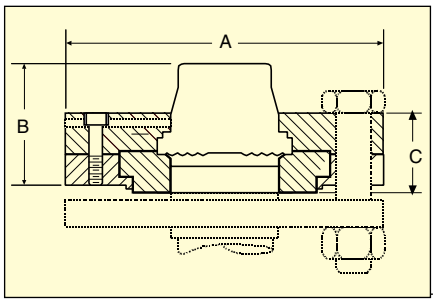
A		B		C	
inch	mm	inch	mm	inch	mm
3¾	95	2⅞	73	1 13⁄16	46

102 Series



FLANGE		A		B		C	
SIZE	RATING #	inch	mm	inch	mm	inch	mm
1½"	150	5	127	2⅜	61	1½	38
	300	6¼	159			1½	38
2"	150	6	152	1 15⁄16	49	1⅜	35
	300	6½	165			1½	38

202 Series



FLANGE		A		B		C	
SIZE	RATING #	inch	mm	inch	mm	inch	mm
1"	150	4¼	108	2 3⁄16	56	1⅜	35
1½"	150	5	127	2 5⁄16	59	1 13⁄32	36
2"	150	6	152	2⅛	54	1 9⁄16	40

SPECIFICATIONS

Pressure: 15 to 2500 psig and vacuums greater than 30 inHg; #150 flanges to 150 psi, #300 flanges to 300 psi

Temperature: See fill solution temperature range

Please Note: When diaphragm seals are connected to pressure instrumentation, slight shifts in calibration will result. OMEGA recalibrates the instrument with the seal attached to negate calibration shifts. Please allow additional lead time when ordering.

Ordering Examples:

1) **PGH-45L-100-1100PM1/2CG**
OMEGA pressure gauge and diaphragm seal with 1 FNPT process connection. All Monel® wetted parts and glycerine fill solution.

2) **PGH-45L-100-2202TT1/2150RFCK**
OMEGA pressure gauge with 51 mm (2") #150 raised face flange diaphragm seal. All PTFE wetted parts and silicone solution.

Notes: 1 *PVC maximum 200 psi @ 23°C (74°F), 125 psi @ 52°C (125°F), 80 psi @ 66°C (150°F).* ***2*** *#150-RF PTFE flange maximum 150 psi @ 66°C (150°F).* ***3*** *PVC, no thread; use solvent cement to install.*

To Order

ORDERING SUFFIX	WETTED MATERIALS	
	DIAPHRAGM	BOTTOM HOUSING
100 Series		
-[†]100SS1/2CG*	316L SS	316 SS
-[†]100PM1/2CG*	K-Monel	Monel 400
-[†]100GG1/2CG*	Hastelloy® B	Hastelloy B
-[†]100HH1/2CG*	Hastelloy® C	Hastelloy C
-[†]100SV1/2CG*	316L SS	PVC (1)(3)
102 Series with #150-RF Flange**		
-[††]102SS1/2150RFCG*	316L SS	316 SSF
-[††]102PM1/2150RFCG*	K-Monel	Monel 400
-[††]102GG1/2150RFCG*	Hastelloy B	Hastelloy B
-[††]102HH1/2150RFCG*	Hastelloy C	Hastelloy C
202 Series with PTFE Seals with #150-RF Flange		
-1202TT1/2150RFCG*	PTFE with 1" process conn. (2)	
-11/2202TT1/2150RFCG*	PTFE with 1½" process conn. (2)	
-2202TT1/2150RFCG*	PTFE with 2" process conn. (2)	

**** "CG"*** *code is for Glycerine fill solution. For Silicone fill solution replace* ***"CG"*** *with* ***"CK"****. For Halocarbon fill solution replace* ***"CG"*** *with* ***"CF"****.*

******* *To order 102 series seals with #300-RF flange, change* ***"150"*** *in model number to* ***"300"*** *and add additional cost.*

[†] *Specify process fitting: ¼, ½, ¾ or 1" (all standard)*

[††] *Specify process fitting: 1½, (standard) or 2" (additional cost)*

Fill Solutions

TYPE	TEMP RANGE	CODE	USAGE
Glycerine	-18 to 204°C (0 to 400°F)	**CG**	Gauge pressure
Silicone	-40 to 315°C (-40 to 600°F)	**CK**	Gauge/vacuum pressure
Halocarbon	-57 to 150°C (-70 to 300°F)	**CF**	Gauge/vacuum pressure in presence of strong oxidizing agents (oxygen, chlorine, etc.)