

## 107/207, 108/208 In-Line Diaphragm Seals

### FEATURES

- 316L stainless steel top housing (standard)
- Available with diaphragm welded or bonded to top housing or removable threaded capsule diaphragms
- Flow through design reduces the possibility of clogging
- Large 2½" diaphragm compatible with most Ashcroft instrumentation

### TYPICAL USES

- Oil and gas
- Refineries
- Chemical and petrochemical
- Water and wastewater
- NACE Compliant Processes (Sour Gas Separation)
- Biogas and Biodiesel

### SPECIFICATIONS

Connection style:	107/207: Socket 108/208: Butt Weld
Process Connection:	¼" (107/207 only), ½", ¾", 1", 1½", or 2"
Instrument Connection:	¼ or ½ NPT
Fill Fluid:	See table 1

### WETTED COMPONENTS

Diaphragm	Bottom Housing	Gasket
See table 1 on page 2	See table 2 on page 2	PTFE (rated for -150°F to 500°F)

### NON-WETTED COMPONENTS

Top Housing	Bolt/Clamp Rings	Clamp Rings
316L SS	Carbon steel	Carbon steel



**107/207**  
Socket

**108/208**  
Butt Weld

**107/108**

**207/208**



**Diaphragm Threaded To Top Housing -**  
flexible design

**Diaphragm Welded or Bonded To Top Housing -**  
eliminates leak path



### KEY BENEFITS

- Ideal for viscous media, slurries and emulsions
- Weld-in design simplifies installations
- Protects instrumentation from corrosive media, extending service life

## 107/207, 108/208 In-Line Diaphragm Seals

TABLE 1 - DIAPHRAGM MATERIALS

Material	Letter Code	100 Series	200 Series	Notes
316L SS	S	•	•	
304L SS	C	•	•	
904L SS	F		•	
Monel® 400	P	•	•	200-series must be ordered with XYM Monel® top housing option
Tantalum	U	•	•	
Hastelloy® C-276	H	•	•	
Hastelloy® B	G	•	•	
Hastelloy® C-22	J	•	•	
Carpenter 20®	D	•	•	
PTFE	T		•	Temp limits: -40°F to 400°F
Viton®	Y		•	Temp limits: -40°F to 350°F Max. pressure: 500 psi
Kalrez®	K		•	Temp limits: 30°F to 212°F Max. pressure: 500 psi
Nickel	N	•	•	
Titanium	Ti		•	Includes titanium top housing
Gold Plated 316L SS	W	•		

TABLE 2 - BOTTOM HOUSING MATERIALS

Material	Letter Code
Steel	B
304L SS	C
316L SS	S
Hastelloy® B	G
Hastelloy® C-22	J
Hastelloy® C-276	H
Carpenter 20®	D
Monel® 400	M
Top Housing and Mounting Hardware only	X

TABLE 3 - FILL FLUIDS

Fill Fluid	Temperature	Viscosity (cSt at RT)	Variation Code	Notes
Glycerin (food grade)	0°F to 400°F (-18°C to 204°C)	1,300	CG	Direct-mounting only. Not for use with vacuum service
50 cSt Silicone	-40°F to 500°F (-40°C to 260°C)	50	CK	
10 cSt Silicone	-40°F to 500°F (-40°C to 260°C)	10	DJ	
Halocarbon® 4.2	-70°F to 300°F (-57°C to 199°C)	4.2	CF	For use with oxygen/oxidizing process media
Slytherm® 800	-40°F to 750°F (-40°C to 400°C)	10	HA	High temperature applications
Syltherm® XLT	-150°F to 500°F (-100°C to 260°C)	1.4	CC	Low temperature applications
Calflo® AF	-20°F to 600°F (-29°C to 316°C)	60	KF	High temperature, silicone-free
Mineral Oil	10°F to 400°F (-12°C to 204°C)	75	MY	
Neobee® M-20 (food grade)	5°F to 400°F (-15°C to 204°C)	9.5	NM	
Silicone (food grade)	-40°F to 500°F (-40°C to 260°C)	350	CZ	
Distilled Water	40°F to 185°F (4°C to 85°C)	0.9	FJ	
50/50 Glycerin/Water	15°F to 200°F (-9°C to 93°C)	30	GH	
Propylene Glycol	-50°F to 325°F (-46°C to 163°C)	54	CV	
Ethylene Glycol	20°F to 325°F (-7°C to 163°C)	14	FK	
50/50 Ethylene Glycol/Water	-25°F to 190°F (-32°C to 88°C)	2.9	CT	
80/20 Glycerin/Water	15°F to 225°F (-9°C to 107°C)	270	GR	
95/5 Water/Propylene Glycol	40°F to 185°F (4°C to 85°C)	1.0	PY	

## 107/207, 108/208 In-Line Diaphragm Seals

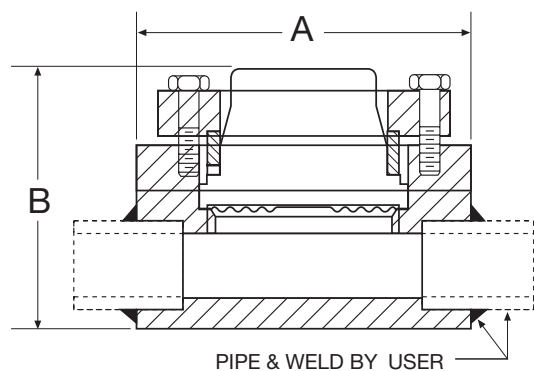
ORDERING CODE	Example:	10	1	07	S	S	02T	XCK	SE	150	RF
<b>Process Connection Size</b>											
25 - ¼" (107/207 only)											
50 - ½"											
75 - ¾"											
10 - 1"		10									
15 - 1½"											
20 - 2"											
<b>Diaphragm Type</b>											
1 - 100-series: Capsule diaphragm threaded into top housing			1								
2 - 200-series: Diaphragm welded (metallic) or bonded (elastomeric) to top housing											
<b>Lower Housing Type</b>											
07 - In-line socket weld (dual sockets for weld-in to piping)				07							
08 - In-line butt weld (dual pipe stubs for weld-in to piping)											
<b>Diaphragm Materials</b>											
S - 316L Stainless steel					S						
See Table 1 on page 2											
<b>Bottom Housing Material</b>											
S - 316L Stainless steel						S					
See table 2 on page 2											
<b>Instrument Connection Size</b>											
02T - ¼ NPT Female instrument connection							02T				
04T - ½ NPT Female instrument connection											
<b>Options (if choosing option(s) must include an "X")</b>											
								X__			
<b>Fill Fluid (See Table 3 on page 2 for more available fill fluids)</b>											
CK - 50 cSt Silicone								CK			
<b>Optional Features</b>											
YM - Monel® 400 top housing (must be ordered with Monel® or tantalum diaphragm)											
SE - Stainless steel rings and bolts									SE		
LD - Stainless steel locking device											
NH - Stainless steel tag											
DU - Instrument Welded to top housing (instrument connection must be like-material to top housing)											
MQ - Positive material identification											
6B - Cleaned for oxygen service											
CD-5 - NACE compliance certificate (must be ordered as a separate line item)											

## 107/207, 108/208 In-Line Diaphragm Seals

### DIMENSIONS in [ ] are millimeters

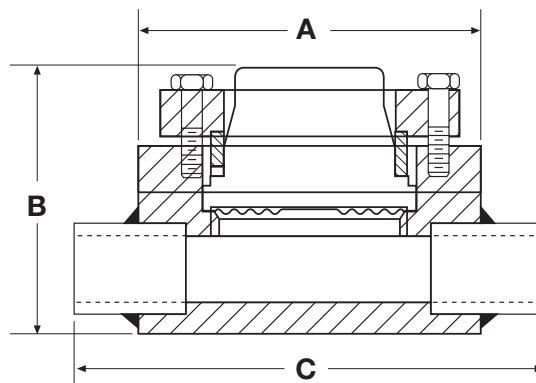
For reference only, consult Ashcroft for specific dimensional drawings

#### 107/207 SOCKET WELD DIAPHRAGM SEAL



Pipe Size	A	B
1/4	4 [102]	2.34 [60]
1/2, 3/4	4 [102]	2.34 [60]
1	4 [102]	2.47 [63]
1 1/2	4 [102]	2.72 [69]
2	4 [102]	2.97 [75]

#### 108/208 BUTT WELD DIAPHRAGM SEAL



Pipe Size	A	B	C
1/4	4 [102]	2.34 [60]	6.00 [153]
1/2, 3/4	4 [102]	2.34 [60]	6.00 [153]
1	4 [102]	2.47 [63]	6.00 [153]
1 1/2	4 [102]	2.72 [69]	6.00 [153]
2	4 [102]	2.97 [75]	6.00 [153]