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Data Sheet

400/500 Threaded All-Welded Diaphragm Seal

FEATURES

- All welded construction ensures a leak-tight, tamper-proof seal
- All 316L stainless steel construction resists corrosive attack from a wide variety of process media
- Flushing connection optional

TYPICAL USES

- Oil and Gas
- Refineries
- Chemical and Petrochemical
- Water and Wastewater
- NACE Compliant Processes
- Biogas and Biodiesel

500
Threaded All-Welded Diaphragm Seal

400
Threaded All-Welded Diaphragm Seal

SPECIFICATIONS

Connection Style:	400, 500: Threaded 401, 501: Threaded with flushing port
Process Connection Size:	¼ to 1½ NPT Female ¼ to 1 NPT Male
Fill Fluid:	Glycerin, Silicone, Halocarbon®, Syltherm® (see Table 2 on page 3 for more fill fluid options)
Pressure Rating (MAWP):	400/401: 4,400 psi 400 (XHP OPT.): 9,000 psi 401 (XHP OPT.): 5,000 psi 500/501: 500 psi
Instrument Connection Size:	¼ or ½ NPT Female
Added Tolerance:	±0.5% typical
Approvals:	CRN, NACE

WETTED COMPONENTS

Diaphragm	Bottom Housing
316L Stainless steel Hastelloy® C-276 Monel® 400 Titanium Tantalum	316L Stainless steel Hastelloy® C-276 Hastelloy® C-22 Monel® Titanium

NON-WETTED COMPONENTS

Top Housing	Bolts/Clamp Rings	Nuts
316L Stainless Steel Hastelloy® C-276 Monel® Titanium	Carbon steel	Stainless Steel

KEY BENEFITS

- **Continuous duty design**
- **Minimized fill volume**
- **Suitable for pressures up to 9,000 psi**

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ORDERING CODE Example:	02	4	00	S	S	02T	XCK	HP
Process Connection Size								
02 - ¼ NPT Male (400, 500 only)	02							
04 - ½ NPT Male (400, 500 only)								
06 - ¾ NPT Male (400, 500 only)								
08 - 1 NPT Male (400, 500 only)								
25 - ¼ NPT Female								
50 - ½ NPT Female								
75 - ¾ NPT Female								
10 - 1 NPT Female								
15 - 1½ NPT Female								
Diaphragm Seal Type								
4 - 400 Series All-welded clamped seal, threaded process connection		4						
5 - 500 Series All-welded seal without clamps, threaded process connection								
Flushing Port								
00 - No flushing port			00					
01 - With flushing port								
Diaphragm Material								
S - 316L Stainless steel				S				
H - Hastelloy® C-276								
J - Hastelloy® C-22								
U - Tantalum								
G - Hastelloy® B								
P - K-Monel® (only available with Monel® top and lower housing)								
Ti - Titanium (only available with a Titanium top and lower housing)								
Bottom Housing Material								
S - 316L Stainless steel					S			
H - Hastelloy® C-276								
J - Hastelloy® C-22								
M - Monel® (includes Monel® top housing standard)								
TI - Titanium (includes Titanium top and housing standard)								
Instrument Connection Size								
02T - ¼ NPT Female						02T		
04T - ½ NPT Female								
Options (if choosing an option(s) must include an "X")							X__	
Fill Fluid (see table 2 on page 3 for more available fill fluids)								
CG - Glycerin								
CK - Silicone SF-96							CK	
CF - Halocarbon®								
Optional Features (see Table 1 below for option list)								
HP - High-pressure clamp rings								HP

When selecting an instrument, refer to the Min/Max Guide for compatibility with this diaphragm seal or scan the QR code to the right.

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TABLE 1 - OPTIONS

Code	Option	400	401	500	501	Notes
LD	Stainless steel locking device	•	•			
PU	Pipe plug for flushing connection		•		•	Plug will match bottom housing material
HB	Hastelloy® C-276 upper housing	•	•	•	•	
SE	SS rings and bolts	•	•			1,500 psi Max., 5,000 psi Max. with XHP
HP	High-pressure clamp rings	•	•			9,000 psi Max., 5,000 psi Max. with SE
6B	Cleaned for oxygen service	•	•	•	•	
AW	Single ½ NPT flushing connection		•		•	¾ NPT Female or smaller process connection
DB	Dual ½ NPT flushing connections		•		•	¾ NPT Female or smaller process connection
DK	Dual ¼ NPT flushing connections		•		•	
DU	Instrument welded to seal	•	•	•	•	
MQ	Positive material identification	•	•	•	•	
W1	Dye penetrant testing	•	•	•	•	
CD-5	NACE compliance certificate	•	•	•	•	Stainless, Hastelloy®, or Monel® wetted materials
CD-6	Typical material certification	•	•	•	•	

TABLE 2 - FILL FLUIDS

Fill Fluid	Temperature	Viscosity (cSt)	Code	Notes
Sylthern® XLT	-150°F to 500°F (-100°C to 260°C)	1.4	CC	Low temperature applications
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	
Halocarbon® 4.2	-70°F to 300°F (-57°C to 199°C)	4.2	CF	For use with oxygen/oxidizing process media
50/50 Ethylene Glycol/Water	-25°F to 190°F (-32°C to 88°C)	2.9	CT	
Polypropylene Glycol	-50°F to 325°F (-46°C to 163°C)	54	CV	
Food-grade Silicone	-40°F to 500°F (-40°C to 260°C)	350	CZ	
10cSt Silicone	-40°F to 500°F (-40°C to 260°C)	10	DJ	
Distilled Water	40°F to 185°F (4°C to 85°C)	0.9	FJ	
Ethylene Glycol	20°F to 325°F (-7°C to 163°C)	14	FK	
50/50 Glycerin/Water	15°F to 200°F (-9°C to 93°C)	30	GH	
80/20 Glycerin/Water	15°F to 225°F (-9°C to 107°C)	270	GR	
Slytherm® 800	-40°F to 750°F (-40°C to 400°C)	10	HA	High 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	5°F to 400°F (-15°C to 204°C)	9.5	NM	Food grade
95/5 Water/Propylene Glycol	40°F to 185°F (4°C to 85°C)	1.0	PY	

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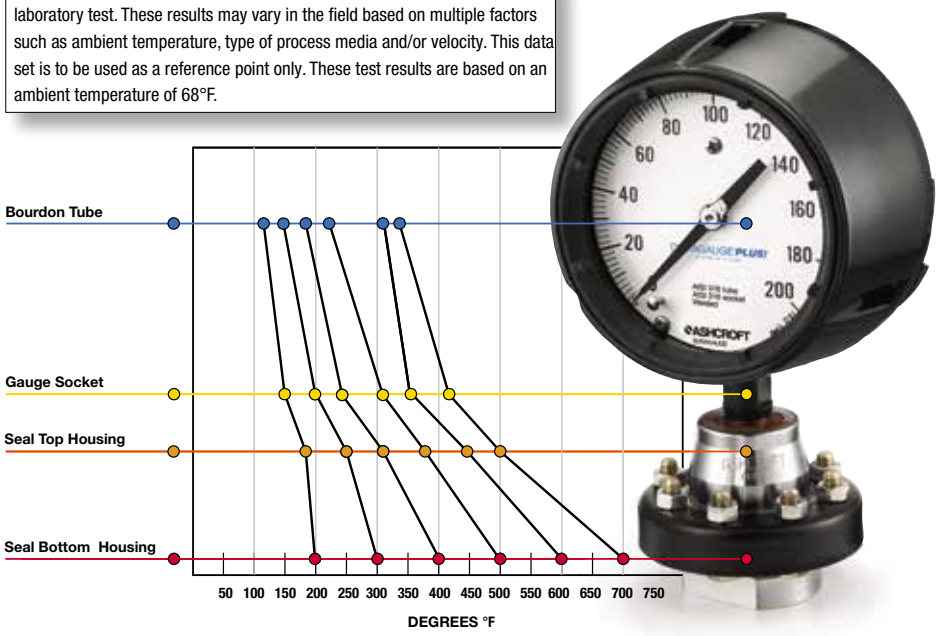
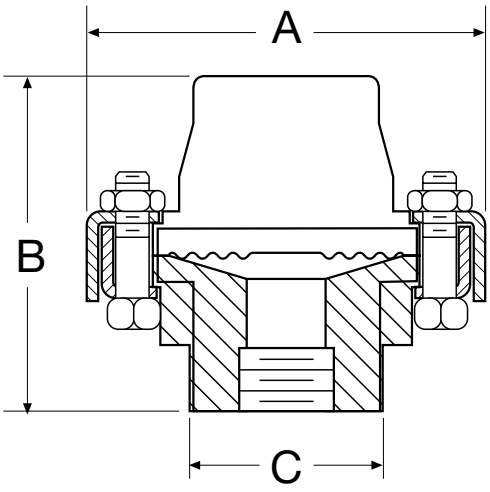
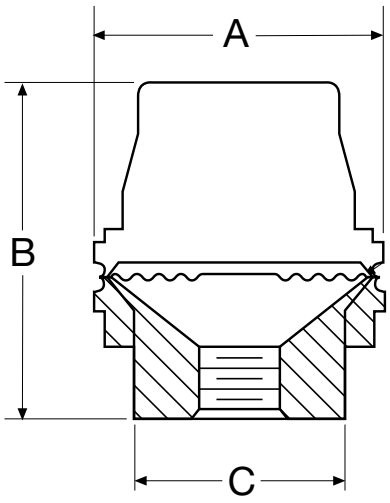
This graph represents the heat dissipation based on results of a specific laboratory test. These results may vary in the field based on multiple factors such as ambient temperature, type of process media and/or velocity. This data set is to be used as a reference point only. These test results are based on an ambient temperature of 68°F.



DIMENSIONS in [ ] are millimeters

For reference only, consult Ashcroft for specific dimensional drawings





400 THREADED SEAL		
A	B	C
3.75 [95]	2.88 [73]	1.81 [46]

500 THREADED SEAL		
A	B	C
2.50 [63]	2.88 [73]	1.81 [46]

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