

Type 311/312 All-Welded “Midi” Diaphragm Seal



PRODUCT FEATURES

- All-welded metal construction, prevents leakage of process media
- No gaskets or bolts
- For use on pressure gauges up to 3½” from 60 to 1000 psi and 4½” gauges 100 psi to 1000 psi
- Top housing material 316L stainless steel standard
- Diaphragm materials in 316L stainless steel, hastelloy C and tantalum
- Bottom housing materials in 316L stainless steel and Hastelloy C
- ¼ NPT or ½ NPT instrument connections
- Type 312 furnished with ¼ NPT flushing connection
- Type 312 not available in male process connections

The compact size of the Ashcroft® 311/312 midi-seal allows it to fit into space-restricted areas and is designed to protect transducers, mini-switches, and 3½” or smaller dial size pressure gauges from corrosion, plugging or freeze-up. All-welded metal construction prevents leakage of process media. It is rated for 2500 psi at 100°F and has a 316L stainless steel top housing standard. Lower housing materials include 316L stainless steel or Hastelloy C. Diaphragm materials include 316L stainless, Hastelloy C or Tantalum. ¼, ½, ¾ or 1 NPT process connection sizes are available. Instrument connection is ¼ or ½ NPT.

PRODUCT SPECIFICATIONS

| | |
|------------------------------------|--|
| Model Number: | Type 311, 312 |
| Process Connection Size: | Threaded male ¼, ½, ¾, 1 NPT Threaded female ¼, ½, ¾, 1 NPT |
| Type: | All-welded (311) All-welded w/flushing connection (312) |
| Diaphragm Material: | 316L SS, Hastelloy C-276, Tantalum |
| Bottom Housing Materials: | 316L SS, Hastelloy C-276 |
| Instrument Connection Size: | Threaded female ¼, ½ NPT |
| Filling Fluid: | Glycerin, Halocarbon, Silicone, Syltherm |

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Table A – Process Connection

| Process Connection | Size | Code |
|-------------------------|------|------|
| Threaded – male NPT* | 1/4 | 02 |
| Threaded – male NPT* | 1/2 | 04 |
| Threaded – male NPT* | 3/4 | 06 |
| Threaded – male NPT* | 1 | 08 |
| Threaded – female NPT | 1/4 | 25 |
| Threaded – female NPT | 1/2 | 50 |
| Threaded – female NPT** | 3/4 | 75 |
| Threaded – female NPT** | 1 | 10 |

*Available in Type 311 only.
**Not available in Type 312.

Table B – Type

| Description | Code |
|--|------|
| All-welded midi-seal | 311 |
| All-welded midi-seal w/flushing connection | 312 |

Table C – Diaphragm Materials

| Materials | Code |
|-----------------|------|
| 316L SS | S |
| Tantalum | U |
| Hastelloy C-276 | H |

Table D – Housing Materials

| Bottom ⁽¹⁾ | Code | Top ⁽²⁾ |
|-----------------------|------|--------------------|
| 316L SS | S | 316L SS |
| Hastelloy C-276 | H | 316L SS |

(1) Other bottom housing materials on application.
(2) Top housing material is 316L SS (standard). Monel mini-seal standard with monel top housing.

Table E – Instrument Connection

| Instrument Connection | Size | Code |
|-----------------------|------|------|
| Threaded – female NPT | 1/4 | 02T |
| Threaded – female NPT | 1/2 | 04T |

Table F – Filling Fluid

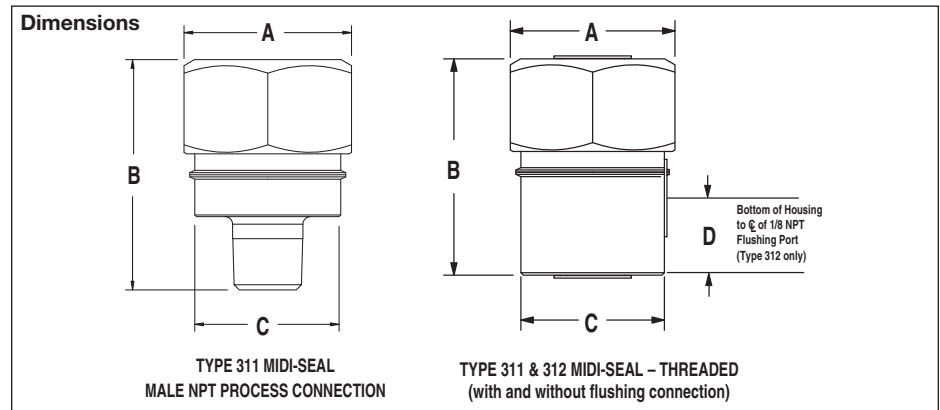
| Fill | Service | Connection to Instrument | Temperature Range °F | Code |
|------------|---|--------------------------|----------------------|------|
| Glycerin | Pressure | Direct Only | 0/400 | CG |
| Silicone | Pressure/Vacuum | Direct or Flexible Line | -40/600 | CK |
| Halocarbon | Pressure/Vacuum in presence of strong oxidizing agent | Direct or Flexible Line | -70/300 | CF |
| Syltherm | Pressure | Direct or Flexible Line | -40/750 | HA |

Monel is a registered trademark of Huntington Alloys, Inc.
Hastelloy is a registered trademark of Cabot Corp.
Halocarbon is a registered trademark of Halocarbon Products
GYLON 3510 is a registered trademark of Garlock Inc.

HOW TO ORDER:

- From Table A... select PROCESS CONNECTION (e.g., 1/4" process code 25)
- From Table B... select TYPE. (311)
- From Table C... select DIAPHRAGM MATERIAL. (e.g., 316L stainless steel-code S)
- From Table D... select BOTTOM HOUSING MATERIAL. (e.g., 316 stainless steel-code S)
- From Table E... select INSTRUMENT CONNECTION size. (e.g., 1/4 NPT-code 02T)
- From Table F... select FILLING FLUID, if diaphragm seal will be attached to instrument. (e.g., Glycerin-code CG)

Coded order: 25-311SS-02T-CG



| TYPE | A | | B | | C | | D | |
|---------|----|------|------|------|------|------|------|------|
| | in | mm | in | mm | in | mm | in | mm |
| 311 | 2 | (51) | 1% | (35) | 1% | (44) | – | – |
| 311/312 | 2 | (51) | 2.65 | (67) | 0.94 | (24) | 0.94 | (24) |