

# Model 100AM

## Diaphragm Seals for Threaded In-Line Process Connections Standard Pressure Rating with Metal Lower Housings Complete with Clean-out Option

### Process Connection Sizes

1/4" NPTF through 1" NPTF

### Pressure Ratings

1000, 2000 PSIG (6.90, 13.80 MPa)

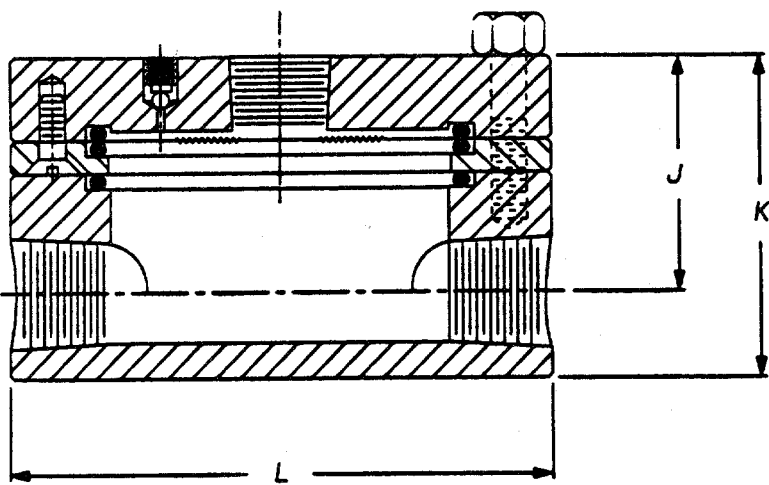
@ 100°F (38°C) (See Notes 2, 3, 4, 8 and 9)

### Dimensional Data

#### Process Connection Size

	1/4"	1/2"	3/4"	1"
J	1.62 (42)	1.75 (44)	1.88 (48)	2.81 (71)
K	2.12 (54)	2.38 (60)	2.48 (63)	3.12 (79)
L	4.0 (102)	4.0 (102)	4.0 (102)	4.0 (102)

( ) Dimensions in millimeters



### Standard Features and Options

This threaded connection, in-line seal has a replaceable diaphragm clamped between o-rings. The 100AM Series Seals are utilized in applications that require a continuous flow of process across the diaphragm to insure that pressure sensing is not inhibited by solids buildup. The 100AM Series Seals are designed to utilize a diaphragm that is field replaceable. This configuration allows for the use of metal as well as elastomer diaphragm materials. The 100AM Series Seals incorporate a "Clean-out" feature which is a separate diaphragm clamping ring which permits removal of the lower housing for inspection and cleaning of the diaphragm without loss of fill fluid. The displacement capability of this series of diaphragm seal is 0.09 cubic inches. The standard pressure rating is 2000 PSIG (13.80 MPa) when Stainless Steel bolting is not required (See Note 3).

### Offerings

**Lower Materials:** All metallic

**Upper Materials:** Carbon Steel or 316 Stainless Steel

**Diaphragm Materials:** All metallic and elastomers

**O-Rings:** Buna-N, Teflon, Viton

**Bolting:** Carbon Steel or 300 Stainless Steel (See Notes 2, 3, 4 and 8)

### CONTROL ENGINEERING DATA

A3 HB4 V 2KF T S 0 C 0 N

#### (15) FILL LIQUID

N = (Standard)

#### (14) TEFLON COATINGS (See Note 10)

0 = None (Standard)

A = Teflon Coated Diaphragm Only

#### (13) BOLTING

C = Carbon Steel Grade 5 (See Note 2)

S = 300 Series Stainless Steel (See Note 3)

H = 300 Series Stainless Steel (Hi-Strength) (See Note 4)

#### (12) FUTURE OPTIONS

0 = Not Applicable

#### (11) UPPER HOUSING MATERIAL

C = Carbon Steel (Standard)

S = 316 Stainless Steel

#### (10) O-RING MATERIAL

B = Buna "N" (Standard)

T = Teflon Virgin

V = Viton

#### (8-9) SEAL DIAPHRAGM MATERIAL

BN = Buna "N"

C2 = Carpenter 20 CB-3

HB = Hastelloy B3

HC = Hastelloy C-276

I6 = Inconel 600

KF = Kel-F

M5 = Monel 400

N2 = Nickel 200

SL = 316L Stainless Steel (See Note 1)

TA = Tantalum

TI = Titanium - Grade 2

TF = Teflon-Virgin

VI = Viton

#### (7) SEAL INSTRUMENT CONNECTION

1 = 1/4" NPTF with bleed

2 = 1/2" NPTF with bleed

#### (6) SEAL PRESSURE RATING @ 100°F (38°C)

Q = 1000 PSIG (6.90 MPa) (See Note 3)

V = 2000 PSIG (13.80 MPa) (See Notes 2 and 4)

#### (5) SEAL PROCESS CONNECTION (SEE NOTES 8 AND 9)

2 = 1/4" NPTF

4 = 1/2" NPTF

5 = 3/4" NPTF

6 = 1" NPTF

#### (3-4) LOWER HOUSING MATERIAL (WETTED)(SEE NOTE 5)

C2 = Carpenter 20 CB-3

CS = Carbon Steel

HB = Hastelloy B3

HC = Hastelloy C-276

I6 = Inconel 600

M4 = Monel 400

N2 = Nickel 200 (See Note 9)

S4 = 304 Stainless Steel

S6 = 316 Stainless Steel

SF = 304L Stainless Steel

SL = 316L Stainless Steel

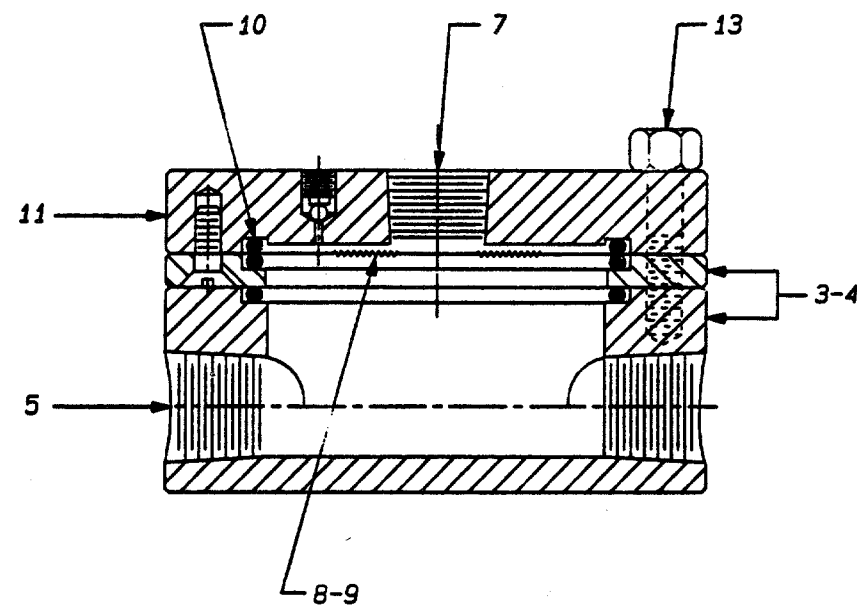
TI = Titanium - Grade 4 (See Note 9)

TP = Tantalum Plate (Wetted Surface Only)(See Note 6)

#### (1-2) DIAPHRAGM SEAL DESIGN

A3 = 100AM Threaded In-Line

CATALOG NUMBERS AS RECEIVED  
FOR THE 100AM SERIES MUST  
CONTAIN FIFTEEN (15) CHARACTERS



### Notes:

- Standard diaphragm material is 316L Stainless Steel for seals with lower housing manufactured of CS, S4, S6, SL and SF.
- Using Grade 5 bolts and Grade 5 nuts will maintain the standard 2000 PSIG (13.80 MPa) pressure rating chosen in Option 6.
- When using 300 Series Stainless Steel bolts and nuts, the standard 2000 PSIG (13.80 MPa) pressure rating will be reduced by 50% to 1000 PSIG (6.90 MPa).
- To maintain the standard 2000 PSIG (13.80 MPa) pressure rating chosen in Option 6 when 300 Series Stainless Steel bolts and nuts are required, then high-strength Stainless Steel bolts and nuts will be necessary.
- The clean-out ring is the same material as the lower housing.
- Adequate plating coverage of threaded connections cannot be guaranteed due to limitations and nature of the plating/coating process. Tantalum plated lowers cannot be supplied with flush connections.
- N.A.C.E. - Non-welded diaphragm seals with 316 Stainless Steel, Hastelloy C-276 or Monel wetted materials of construction will meet the requirements of N.A.C.E. International Document MR-0175-1995.
- Refer to Miscellaneous Data Section for Pressure-Temperature Rating Guide.
- Maximum working pressure limited to 1250 PSIG (8.63 MPa) @ 100°F (38°C) for all lower housings with pipe threads larger than 1/4" NPTF that are constructed of Nickel 200 or with pipe threads larger than 3/4" NPTF that are constructed of Titanium Grade 4 due to connection thread strength limitations.
- Teflon-S® Coating (FEP Grade)