

# Model 300S

## Diaphragm Seals for Socket Welded Off-Line Process Connections Standard Pressure Rating with Metal Lower

### Process Connection Sizes

1/4" through 1"

All Pipe Schedules per ASME/ANSI B36.10 or B36.19

### Maximum Working Pressure

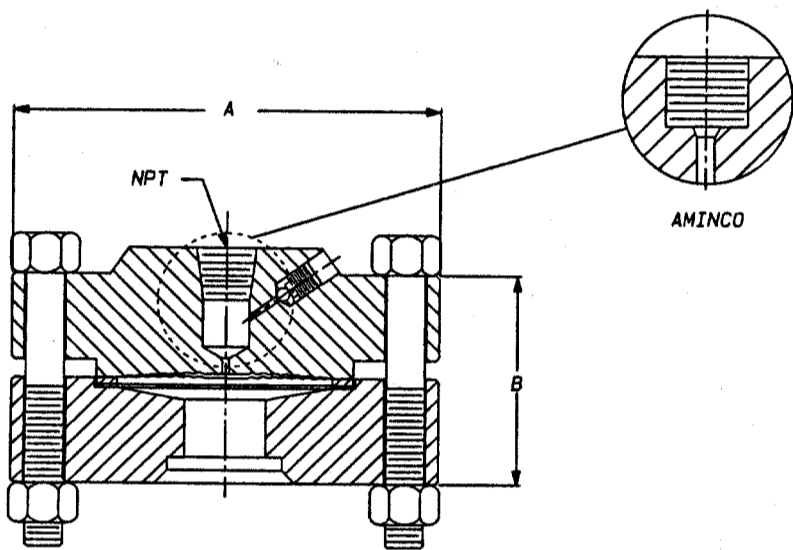
Conforms to Pipe Schedule Ratings as calculated by ASME/ANSI B31.1 Equation "4" @ 100°F (38°C) (See Notes 4, 5, 6 and 9)

### Dimensional Data

#### Process Connection Size

	1/8" - 1/4"	3/8" - 1"	1-1/4" - 1-1/2"
A	3.50 (89)	3.50 (89)	3.50 (89)
B	2.00 (51)	2.00 (51)	2.00 (51)

( ) Dimensions in millimeters



### Standard Features and Options

This socket weld connection, off-line seal utilizes a diaphragm that is welded to the upper housing. This design allows for the use of diaphragm materials that are of a weldable grade. The displacement capability of this series of diaphragm seal is 0.05 cubic inches utilizing a 2.4" (60.96mm) diaphragm. The upper housing can be removed from the lower housing for welding of lower, inspection, or cleaning of the diaphragm without loss of fill fluid. The seal-off feature is standard.

### Offerings

**Lower Materials:** All metallic

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

Optional materials are Carpenter 20, Titanium and Monel - Refer to Control Engineering Data for Details.

**Diaphragm Materials:** All metallic

**Bolting:** Carbon Steel or 300 Series Stainless Steel (See Notes 4, 5, 6 and 9)

### CONTROL ENGINEERING DATA

DHS6 4 K 2 H G S 0 C 0 G N

(15) FILL LIQUID  
N = (Standard)

(14) PLATING OPTION  
0 = None (Standard)  
G = Gold Plating Diaphragm Only (See Note 10)

(13) TEFLON COATINGS (See Note 11)  
0 = None (Standard)  
A = Teflon Coated Diaphragm Only

(12) BOLTING  
0 = None  
C = Carbon Steel - Grade 5 (See Note 4)  
S = 300 Series Stainless Steel (See Note 5)  
H = 300 Series Stainless Steel (Hi-Strength) (See Note 6)

(11) FUTURE OPTIONS  
0 = Not Applicable

(10) UPPER HOUSING MATERIAL  
B = Carbon Steel - N.A.C.E. (No Weld Ring)  
F = 316 Stainless Steel - N.A.C.E. (No Weld Ring)  
N = Monel - N.A.C.E. (No Weld Ring)  
C = Carbon Steel (Standard)  
S = 316 Stainless Steel  
M = Monel (See Note 7)  
2 = Carpenter 20 CB-3 (See Notes 2 and 7)  
T = Titanium (See Notes 2 and 7)

(9) SEAL GASKET MATERIAL  
0 = Not Applicable  
B = Buna N  
G = Grafoil  
T = Teflon (See Note 3)  
V = Viton  
S = CGR2750 (Standard)

(8) SEAL DIAPHRAGM MATERIAL  
C = Carpenter 20 CB-3 (See Notes 2 and 7)  
H = Hastelloy B3  
D = Hastelloy C-276  
I = Inconel 600  
M = Monel 400 (See Note 7)  
N = Nickel 200  
J = 316L Stainless Steel (See Note 1)  
T = Tantalum  
E = Titanium - Grade 2 (See Notes 2 and 7)

(7) SEAL INSTRUMENT CONNECTION  
1 = 1/4" NPTF with bleed  
2 = 1/2" NPTF with bleed

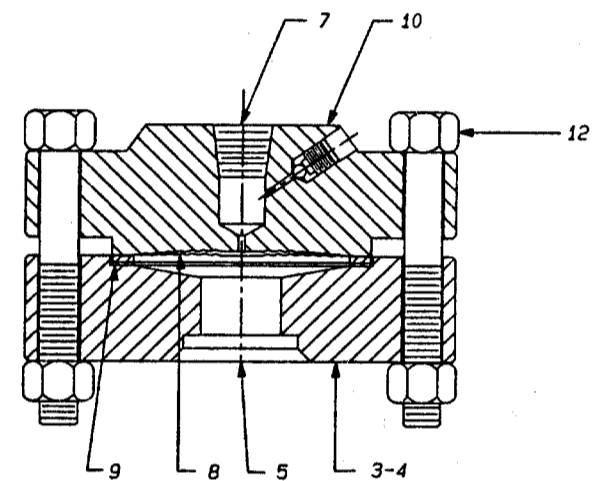
(6) SEAL PIPE (PIPE SCHEDULE) RATING @ 100°F (38°C) (See Notes 4, 5, 6 and 9)  
H = Schedule 5  
I = Schedule 10  
J = Schedule 40 (Standard)  
K = Schedule 80  
L = Schedule 160

(5) SEAL PROCESS CONNECTION (See Note 9)  
2 = 1/4"  
4 = 1/2"  
5 = 3/4"  
6 = 1"  
0 = No Lower Housing (Upper Housing Only)

(3-4) LOWER HOUSING MATERIAL (WETTED)  
C2 = Carpenter 20 CB-3  
CS = Carbon Steel  
HB = Hastelloy B3  
HC = Hastelloy C-276  
I6 = Inconel 600  
M4 = Monel 400  
N2 = Nickel 200  
S4 = 304 Stainless Steel  
S6 = 316 Stainless Steel  
SF = 304L Stainless Steel  
SL = 316L Stainless Steel  
TI = Titanium - Grade 4  
00 = No Lower Housing (Upper Housing Only)

(1-2) DIAPHRAGM SEAL DESIGN  
DH = 300S - Socket Welded Off-Line

CATALOG NUMBERS AS RECEIVED FOR THE 300S 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.
- Standard diaphragm material is Tantalum for seals with lowers housing manufactured of C2 and TI.
- Teflon gaskets are standard for seals with lower housings manufactured of C2 and TI.
- Using Grade 5 bolts will maintain the pressure rating calculated from pipe size and schedule specified in Options 5 and 6.
- When using 300 Series Stainless Steel bolts, the maximum pressure rating calculated will be reduced by 50% when the pipe schedule is greater than 40 as specified in Option 6.
- Pipe schedules greater than 40 will be supplied with high-strength stainless steel bolting to maintain seal pressure rating when stainless steel bolts are required.
- When a Monel, Carpenter 20 or Titanium diaphragm is chosen in Position 8, then an equivalent upper housing material is required.
- N.A.C.E. - Welded diaphragm seals with Hastelloy C-276 or Monel wetted materials of construction will meet the requirements of N.A.C.E. International Document MR-0175-1995. 316 Stainless Steel construction will NOT BE offered in a welded design as meeting N.A.C.E. MR-0175-1995 requirements as the weld area of the diaphragm seal will not meet the maximum hardness specifications within this document.
- Refer to Miscellaneous Data Section for ASME B31.1 Equation "4."
- Tantalum and Titanium materials cannot be gold plated.
- Teflon-S® coating (FEP Grade).