

# Model 300J3

## Diaphragm Seals for Saddle Weld Process Connections Standard Pressure Rating with Metal Lower Housing

### Process Connection Sizes

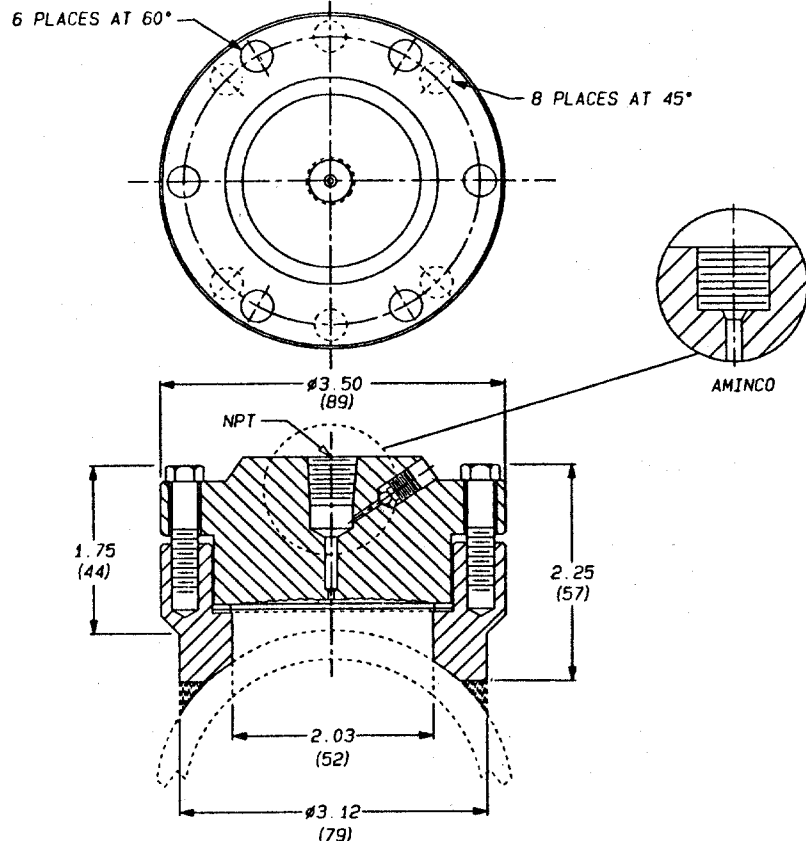
3" and larger

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



( ) Dimensions in millimeters

### Standard Features and Options

This saddle weld connection seal has a diaphragm 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. Recommended for applications that require a continuous flow of process across the diaphragm to insure that pressure sensing is not inhibited by solids buildup. Having the diaphragm welded to the upper housing permits removal of the lower housing for welding of lower, inspection, or cleaning of the diaphragm without loss of fill fluid.

The Seal-off feature is standard. Available with a standard six hole or optional eight hole bolt pattern. An upper only assembly can be purchased to fit lowers welded in line.

### 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

DAS6 B J 2 T S C O C 0 0 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 Note 7)  
T = Titanium (See Note 7)  
A = Carbon Steel (6 bolt M and G pattern)  
3 = 316 Stainless Steel (6 bolt M and G pattern)  
E = Monel (6 bolt M and G pattern) (See Note 7)  
4 = Carpenter 20 CB-3 (6 bolt M and G pattern) (See Note 7)  
H = Titanium (6 bolt M and G pattern) (See Note 7)  
J = Carbon Steel (8 bolt M and G pattern)  
K = 316 Stainless Steel (8 bolt M and G pattern)  
L = Monel (8 bolt M and G pattern) (See Note 7)  
P = Carpenter 20 CB-3 (8 bolt M and G pattern) (See Notes 2 and 7)  
5 = Titanium (8 bolt M and G pattern) (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 Note 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 (See Note 2)  
E = Titanium - Grade 2 (See Note 7)

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

(6) SEAL PRESSURE (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  
B = 3"

(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  
DA = 300J3 Saddle Welded In-Line

CATALOG NUMBERS AS RECEIVED FOR THE 300J3 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 lower 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 the Pipe Schedule specified in Position 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 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).