

## Type 702, 703 & 740, 741 High Displacement Diaphragm Seal



**Type 702 – Low Pressure Flanged**  
½, ¾, 1, 1½, 2, 3 NPT



**Type 741 – Threaded  
(w/flushing conn.)**  
¼, ½, ¾, 1 NPT

### Features:

- For pressure instruments ranging from 30" H<sub>2</sub>O to 750 psi
- Used in instruments with large displacement actuators
- For applications requiring an impermeable metallic diaphragm
- Available in many material combinations
- Diaphragm electron beam welded to isolator body
- Furnished with fill/bleed connection

### SPECIFICATIONS

**Model Number:** Type 702, 703 Flanged Raised Face, 740, 741 Threaded

**Process Connection Size:**  
Threaded: ¼ — 1  
Flanged: ½ — 3

**Instrument Connection:** ¼, ½ NPT

**Diaphragm Material:** 316SS, Tantalum, Titanium, Hastelloy B, Hastelloy C 276, K-Monel

**Bottom Housing Material:** 316SS, Tantalum, Titanium, Hastelloy B, Hastelloy C 276, Monel, Carpenter 20

**Top Housing Material:**

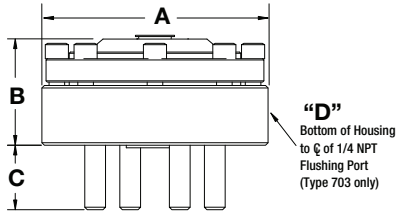
- 316 stainless steel standard,
- Monel top housing standard with Monel diaphragm
- Titanium top housing standard with Titanium diaphragm

**Filling Fluid:** Glycerin, Silicone, Halocarbon, Syltherm

<b>OPTIONS</b>	<b>Code</b>
Pipe plugs for flushing connections – pipe plugs are available in the same materials as bottom housings per Table C	<b>PU</b>
Welded instrument to diaphragm seal	<b>DU</b>
Ring joint (Flanged seal only)	<b>RJ</b>
Flat face (Flanged seal only)	<b>FF</b>
Clean for gaseous oxygen or strong oxidizing agent applications.	<b>6B</b>

# Type 702, 703 & 740, 741 High Displacement Diaphragm Seal

## Dimensions: Types 702, 703\* Flanged



### Flanged 1/2" through 3"

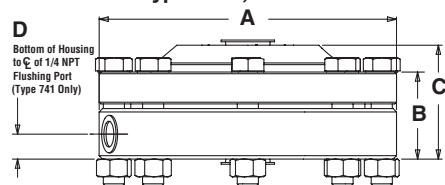
Flange Rating	702, 703			
150 Class	A	B	C	D
Size	in. mm	in. mm	in. mm	in. mm
1/2"	5.94 (135)	2.56 (65)	1.47 (37)	1.06 (27)
3/4"	5.94 (135)	2.56 (65)	1.47 (37)	1.06 (27)
1"	5.94 (135)	2.50 (64)	1.47 (37)	1.00 (25)
1 1/2"	5.94 (135)	2.50 (64)	1.47 (37)	1.00 (25)
2"	6.00 (152)	2.63 (67)	2.06 (52)	1.13 (29)
2 1/2"	7.50 (191)	2.50 (64)	2.06 (52)	1.00 (25)
3"	7.50 (191)	2.38 (60)	2.06 (52)	1.06 (27)

Flange Rating	702, 703			
300 Class	A	B	C	D
Size	in. mm	in. mm	in. mm	in. mm
1/2"	5.94 (135)	2.56 (65)	1.47 (37)	1.06 (27)
3/4"	5.94 (135)	2.75 (70)	2.06 (52)	1.06 (27)
1"	5.94 (135)	2.75 (70)	2.06 (52)	1.00 (25)
1 1/2"	6.50 (165)	2.75 (70)	2.69 (68)	1.00 (25)
2"	6.50 (165)	2.63 (67)	2.06 (52)	1.13 (29)
2 1/2"	7.50 (191)	2.63 (67)	2.69 (68)	1.00 (25)
3"	8.50 (216)	2.63 (67)	2.69 (68)	1.06 (27)

Rating Rating	702, 703			
600 Class	A	B	C	D
Size	in. mm	in. mm	in. mm	in. mm
1/2"	5.94 (135)	2 3/4 (70)	2 5/8 (68)	1.06 (27)
3/4"	5.94 (135)	2 3/4 (70)	2 5/8 (68)	1.06 (27)
1"	5.94 (135)	2 3/4 (70)	2 5/8 (68)	1.00 (25)
1 1/2"	6.50 (165)	2 3/4 (70)	2 5/8 (68)	1.00 (25)
2"	6.50 (165)	2 3/4 (67)	2 5/8 (52)	1.13 (29)
2 1/2"	7.50 (191)	2 3/4 (67)	2 5/8 (52)	1.00 (25)
3"	8.50 (216)	2 3/4 (67)	2 5/8 (52)	1.06 (27)

\*with flushing connection

## Dimensions: Types 740, 741 Threaded



### Threaded 1/2" through 1"

A	B	C	D
in. mm	in. mm	in. mm	in. mm
5.25 (133)	1.5 (38)	2.0 (51)	.437 (11)

**Table A – Process Connection/Type Number**

Process Connection	Process Connection Size/Code – Inches <sup>(1)(2)</sup>											Type No.	Pressure Rating(1,6)	
	Size Code	1/4	1/2	3/4	1	1 1/2	2	3	4	6	8			
Threaded–female NPT		•	•	•	•								740	30 in.H <sub>2</sub> O to 750 psi
Threaded–female NPT (with flushing connection) <sup>(2)</sup>		•	•	•	•								741	30 in.H <sub>2</sub> O to 750 psi
													Type No.	Flange Rating
Raised Face Flange		•	•	•	•	•	•	•	•	•	•	•	702	150 to 600 class
Raised Face Flange (with flushing connection) <sup>(2)</sup>		•	•	•	•	•	•	•	•	•	•	•	703	150 to 600 class

**Table B Diaphragm Materials(3)**

Material	Code	Top Material
316L stainless steel	S	316L SS
Hastelloy B	G	316L SS
Hastelloy C 276	H	316L SS
Tantalum	U	316L SS
K-Monel	P	Monel 400
Titanium	TI	Titanium

**Table C Bottom Housing Materials**

Material	Code
316L stainless steel	S
Hastelloy B	G
Hastelloy C 276	H
Carpenter 20	D
Monel	M
Titanium	TI

**Table D Instrument Connection**

Size – NPT	Code
1/4	02T
1/2	04T

**Table E – Filling Fluid**

Filling	Service	Connection to Instrument	Temperature Range °F	Code
Glycerin <sup>(4)</sup>	Pressure	Direct Only	0/400	CG
Silicone	Pressure/Vacuum	Direct or Flexible Line	-40/600	CK
Halocarbon <sup>(5)</sup>	Pressure/Vacuum in presence of strong oxidizing agents	Direct or Flexible Line	-70/300	CF
Syltherm	Pressure/Vacuum	Direct or Flexible Line	-40/750	HA

**NOTES:**

- (1) Per ASME B16.5.
- (2) 741 and 703 seal supplied with 1/4" flushing connection.
- (3) Diaphragms welded to top housing.
- (4) Glycerin not recommended for vacuum, compound or inches of water ranges.
- (5) Halocarbon required on applications involving strong oxidizing agents.
- (6) Type 5503 Differential Pressure gauge only. 10 psi min.

**HOW TO ORDER:**

1. From Table A...select TYPE NUMBER and process connection size (e.g., 1/4" process–code 50-740)
2. From Table B...select DIAPHRAGM MATERIAL. (e.g., Tantalum–code U)
3. From Table C...select BOTTOM HOUSING MATERIAL. (e.g., Hastelloy C 276–code H)
4. From Table D...select INSTRUMENT CONNECTION size. (e.g., 1/2 NPT–code 04T)
5. From Table E...select FILLING FLUID, if diaphragm seal will be attached to instrument. (e.g., Halocarbon–code CF)

Coded order: 50-740-UH-04T-CF