

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



Type 702 – Low Pressure Flanged
 $\frac{1}{2}$, $\frac{3}{4}$, 1, 1 $\frac{1}{2}$, 2, 3 NPT



**Type 741 – Threaded
 (w/flushing conn.)**
 $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$, 1 NPT

Features:

- For pressure instruments ranging from 30" H₂O 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

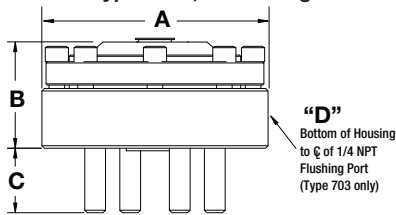
SPECIFICATIONS

Model Number:	Type 702, 703 Flanged Raised	Type 740, 741 Threaded
Process Connection Size:	Threaded: $\frac{1}{4}$ — 1 Flanged: $\frac{1}{2}$ — 3	
Instrument Connection:	$\frac{1}{4}$, $\frac{1}{2}$ 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:	<ul style="list-style-type: none"> • 316 stainless steel standard, • Monel top housing standard with Monel diaphragm • Titanium top housing standard with Titanium diaphragm 	
Filling Fluid:	Glycerin, Silicone, Halocarbon, Syltherm	

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

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Dimensions: Types 702, 703* Flanged



Flanged 1/2" through 3"

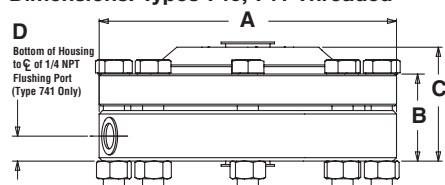
Flange Rating 150 Class	A	B	C	702, 703 D
Size	in. mm	in. mm	in. mm	in. mm
1/2"	5.94 (135)	2.56 (65)	1.47 (37)	1.06 (27)
3/4"	5.94 (135)	2.56 (65)	1.47 (37)	1.06 (27)
1"	5.94 (135)	2.50 (64)	1.47 (37)	1.00 (25)
1 1/2"	5.94 (135)	2.50 (64)	1.47 (37)	1.00 (25)
2"	6.00 (152)	2.63 (67)	2.06 (52)	1.13 (29)
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 300 Class	A	B	C	702, 703 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 600 Class	A	B	C	702, 703 D
Size	in. mm	in. mm	in. mm	in. mm
1/2"	5.94 (135)	2 3/4 (70)	2 5/16 (68)	1.06 (27)
3/4"	5.94 (135)	2 3/4 (70)	2 5/16 (68)	1.06 (27)
1"	5.94 (135)	2 3/4 (70)	2 5/16 (68)	1.00 (25)
1 1/2"	6.50 (165)	2 3/4 (70)	2 5/16 (68)	1.00 (25)
2"	6.50 (165)	2 3/4 (67)	2 5/16 (52)	1.13 (29)
2 1/2"	7.50 (191)	2 3/4 (67)	2 5/16 (52)	1.00 (25)
3"	8.50 (216)	2 3/4 (67)	2 5/16 (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 ⁽¹⁾⁽²⁾											Type No.	Pressure Rating(1,6)
	Size Code	1/4 25	1/2 50	3/4 75	1 10	1 1/2 15	2 20	3 30	4 40	6 60	8 80		
Threaded–female NPT		•	•	•	•							740	30 in.H ₂ O to 750 psi
Threaded–female NPT (with flushing connection) ⁽²⁾		•	•	•	•							741	30 in.H ₂ O to 750 psi
Raised Face Flange			•	•	•	•	•	•				Type No.	Flange Rating
Raised Face Flange (with flushing connection) ⁽²⁾			•	•	•	•	•	•				702	150 to 600 class
			•	•	•	•	•	•				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 ⁽⁴⁾	Pressure	Direct Only	0/400	CG
Silicone	Pressure/Vacuum	Direct or Flexible Line	–40/600	CK
Halocarbon ⁽⁵⁾	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