

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:

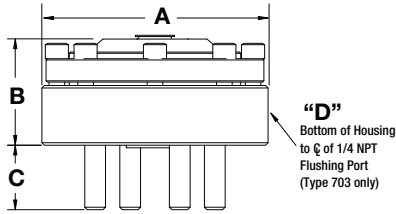
- For pressure instruments ranging from 30" H₂O to 750 psi
- Used in instruments with large displacement actuators
- For applications requiring an impermeable metallic diaphragm
- Available in many material combinations
- Diaphragm electron beam welded to isolator body
- Furnished with fill/bleed connection

SPECIFICATIONS

Model Number:	Type 702, 703 Flanged Raised 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:	<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

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

Dimensions: Types 702, 703* Flanged



Flanged 1/2" through 3"

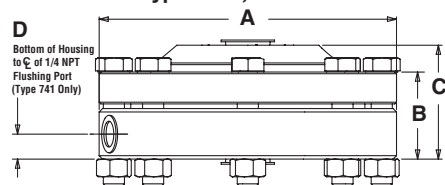
Flange Rating	702, 703			
150 Class	A	B	C	D
Size	in. mm	in. mm	in. mm	in. mm
1/2"	5.94 (135)	2.56 (65)	1.47 (37)	1.06 (27)
3/4"	5.94 (135)	2.56 (65)	1.47 (37)	1.06 (27)
1"	5.94 (135)	2.50 (64)	1.47 (37)	1.00 (25)
1 1/2"	5.94 (135)	2.50 (64)	1.47 (37)	1.00 (25)
2"	6.00 (152)	2.63 (67)	2.06 (52)	1.13 (29)
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 ⁽¹⁾⁽²⁾											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 ₂ O to 750 psi
Threaded–female NPT (with flushing connection) ⁽²⁾		•	•	•	•								741	30 in.H ₂ O to 750 psi
													Type No.	Flange Rating
Raised Face Flange		•	•	•	•	•	•	•	•	•	•	•	702	150 to 600 class
Raised Face Flange (with flushing connection) ⁽²⁾		•	•	•	•	•	•	•	•	•	•	•	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