Process Media and Material Compatibility: Since the wetted parts of the diaphragm seal assembly, which consist of the lower housing and diaphragm element itself, as well as any gaskets, will come in contact with the process, it is imperative to ensure the proper material is selected. The material selected must be compatible with all the various chemicals the seal may come in contact with while in service.

Temperature (Process & Ambient): Each diaphragm seal assembly is filled with an amount of fill fluid at ambient temperature. The increase of process or media temperature can cause the fill fluid to expand, creating a larger volume and pressure build up in the assembly.

Pressure Instrument: The diaphragm seal chosen must have the ability to provide enough volumetric displacement to drive the instrument through it's full range. A rule of thumb is as follows: The lower the pressure, the more displacement is needed. The larger the gauge, the more displacement is needed. The smaller the diaphragm, the less displacement it can provide.

Process Connection and Orientation: The most common connections for diaphragm seals are threaded from 1/4" to 1" NPT and flanged. Be sure to specify both the flange size and rating when selecting a flanged seal.

Pressure Range: As stated above the diaphragm selected must be able to handle the pressure range to be sensed. The lower the pressure, the larger the diaphragm element must be to ensure sensitivity and proper displacement.

Response Time: Response time to sudden changes in process pressure can be effected by many things, such as size of the diaphragm, viscosity of the fill fluid, ambient and process temperatures and the use of capillary for remote mounted gauges.

Fill Fluid: Fill fluid selection is critical to the performance of the diaphragm seal assembly. Process and ambient temperatures, pressure and compatibility with the process media must be considered. Inert fills such as Halocarbon®, Fluorolube® and Krytox® must be specified when oxidizers are present.

	Series	Instrument Connection			Process Connection						Wetted Parts Material									Pressure Range							
Catalogue Page		1/4" NPT	1/2" NPT	1/2" NPT Male	1/4" NPT	1/2" NPT	3/4" NPT	≥1" NPT	Tri-Clamp®	RF Flange	Wafer Flange	Buna	Hastelloy® C	Monel®	PVC	Stainless Steel	Tantalum	PTFE	Viton®	Other	Vac - 200 psi	30-600 psi	0-1,000 psi	30-1,300 psi	50-2,000 psi	30-2,500 psi	0-2,500 psi	30-2,500 psi	1,000-6,000 psi	RoHS compliant
152	D10 #10 PVC Diaphragm Seal	X			X	X									X			X			X									
153	D15 #15 Diaphragm Seal	X					X									X									X				X	X
154	D20 #20 Diaphragm Seal	X							X							X						X								X
155	D30 #30 Diaphragm Seal	X			X											X													X	X
156	D40 #40 Diaphragm Seal	X	X		X	X										X							X							X
157	D44 #80 Flanged Diaphragm Seals (PTFE)	X	X							X								X					X							
159	D44 #80 Flanged Diaphragm Seals (Welded)	X	X							X			X	X	X	X	X	X	X	X							X			
161	D46 Flanged Flush Mount Seal	X	X							X						X								X						
162	D70 #70 Diaphragm Seals	X	X		X	X	X	X				X	X	X		X		X	X							X				X
164	D71 #70 NACE Diaphragm Seals	X	X		X	X		X				X	X					X	X									X		
166	D81 #60 Isolation Ring	X	X	X				X			X	X	X		X	X		X	X	X	X		X							
168	D85 In Line Flow Thru Seal	X	X		X	X	X	X								X						X								
169	D90 Saddle Weld Seal	X	X					X					X	X		X	X	X	X	X		X								

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Krytox® is a registered trademark of DuPont Corporation
Monel® is a registered trademark of Inco Alloys International
Tri-Clamp® is a registered trademark of Tri-Clover
Viton® is a registered trademark of DuPont Performance Elastomers

Note: When selecting a diaphragm seal, always refer to ASME B40.100 (2013)