

#10 PVC Diaphragm Seal



#15 Diaphragm Seal



#20 Diaphragm Seal



#30 Diaphragm Seal



#70 Diaphragm Seal



#70 NACE Diaphragm Seal MR0175-2003



#40 Diaphragm Seal

#70 NACE

Diaphragm Seal MR0103-2003



#50

Diaphragm Seal

#80 Diaphragm Seal





# #10 PVC Diaphragm Seal

(30" Vac - 200 psi/kPa)



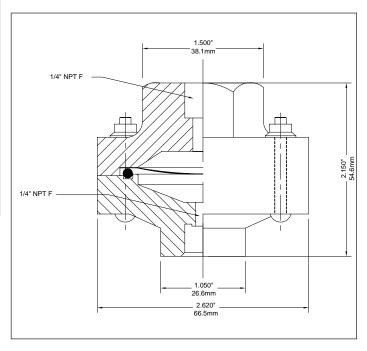
#### **Description**

Winters #10 PVC (Polyvinyl Chloride) Diaphragm Seal features a durable and flexible Teflon® diaphragm seal, which serves as a protective barrier between the process fluid and the instrument. This PVC Seal provides an economical solution to protect instruments from corrosion and clogging, while maintaining high accuracy and dependability, within an operating range of full vacuum to 200 psi/kPa. Each Winters #10 PVC diaphragm seal is used to isolate and protect a pressure or vacuum instrument used on ultra-pure or highly corrosive fluid lines. The Winters #10 PVC Diaphragm Seal can be used with liquids such as demineralized water, sulphuric acid, hydrochloric acid and caustic or with gases (such as corrosive air and ammonia) when such fluids will corrode metal instruments.

Specifications	
Housing:	PVC (Polyvinyl Chloride, Type 1,
	Grade 1)
Diaphragm:	Teflon®
Minimum Operating	30" Hg Vacuum/(-100kPa)
Pressure:	- Company of the Comp
Maximum Operating	200 psi/(1380 kPa)
Pressure:	
Gauge Connection:	¹/₄″ NPTF
Process Connection:	<sup>1</sup> / <sub>4</sub> " NPTF and <sup>1</sup> / <sub>2</sub> " NPTF are
	standard
Process Temperature:	Recommended for media
	temperature 77°F to 104°F (25°C to
	40°Ĉ)

# How to Order: Specify Product Code PRODUCT CODES

¹/4" NPTF x ¹/4" NPTF	D985
1/4" NPTF x 1/2" NPTF	D986





# #15 In Line Diaphragm Seal



CRN

#### **Description**

Winters In Line Diaphragm Seal is constructed with a welded diaphragm placed at the end of the male NPT connection, eliminating the normal diaphragm chamber where solidification of the process media may render the seal inoperable. Winters In Line Diaphragm Seal is suitable for any process where freezing or solidification of the pressure media is a concern. Constructed entirely of AISI 316 stainless steel, the Winters In Line Diaphragm Seal is rugged and suitable for the most severe process applications.

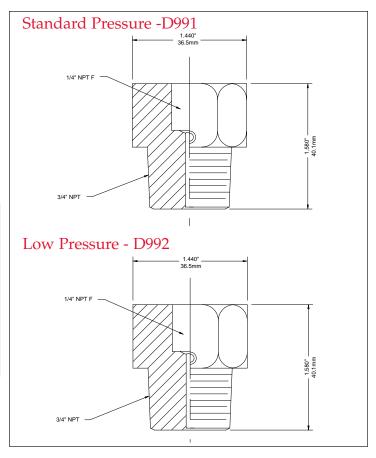
(Canadian Registration Number applies only to standard pressure diaphragm seal - D991)

PRODUCT CODES		
1/4" NPTF x 3/4" NPTM		
<sup>1</sup> / <sub>4</sub> " NPTF x <sup>3</sup> / <sub>4</sub> " NPTM	D992	Low Pressure**

\*Standard Pressure: 600 psi to 5800 psi (4100 kpa to 40,000 kpa)
\*\*Low Pressure: 50 psi to 2000 psi (345 kpa to 13,780kpa)

Standard Specifications	
Housing:	AISI 316 stainless steel
Diaphragm:	AISI 316L stainless steel, welded
Minimum Operating	
Pressure:	600 psi (4100 kPa)
Maximum Operating	-
Pressure:	5800 psi (40,000 kPa)
Gauge Connection:	¹/₄" NPT female standard
<b>Process Connection:</b>	³/4" NPT male standard
Process Temperature:	-49°F to 302°F (-45°C to 150°C)

Low Pressure Specifications		
Housing:	AISI 316 stainless steel	
Diaphragm:	AISI 316L stainless steel, welded	
Minimum Operating		
Pressure:	50 psi (345 kPa)	
Maximum Operating	•	
Pressure:	2000 psi (13,780 kPa)	
Gauge Connection:	¹/₄" ÑPT female standard	
<b>Process Connection:</b>	³/₄" NPT male standard	
Process Temperature:	-20°F to 185°F (-31°C to 360°C)	





30 to 1000 psi (200 to 6,900 kPa)

# R R

CRN

#### Description

The Winters #20 Sanitary Seal meets the requirements of dairy, food, beverage, chemical and pharmaceutical industries. When Winters #20 Sanitary Seal is attached to a Winters all stainless steel construction pressure gauge, the unit becomes completely sanitary, making it impossible for bacteria to form and contaminate the process product. This unit is 3A designated for all sanitary applications (see Sanitary Gauges 3A specification sheet in Premium section).

The Winters Sanitary Seal is 3A approved and CRN registered.

Specifications		
-		
Housing:	AISI 316 stainless steel	
Diaphragm:	AISI 316L stainless steel, welded	
Minimum Operating	30 psi (200 kPa)	
Pressure:	_	
Maximum Operating	1000 psi (6,900 kPa)	
Pressure:	-	
Gauge Connection:	<sup>1</sup> / <sub>4</sub> " NPT female standard,	
	<sup>1</sup> / <sub>2</sub> " NPT female available	
Process Connection:	1 <sup>1</sup> / <sub>2</sub> " (40mm) and 2" (50mm)	
	Tri-clamp® fitting standard	
Process Temperature:	-4°F to 248°F (-20°C to 120°C)	

<sup>®</sup> Tri-clamp is a registered trademark of Tri-Clover.

1/4" NPT  1/4" NPT  1/4" NPT  1/4" NPT  1/4" NPT  1/2" NPT  1/2" NPT  1/2" NPT	I <sup>1</sup> / <sub>2</sub> " Tri-clamp®			
TO FIT 1 1/2" SEAL  1.985 50.4mm  1/4" NPT 1/2" NPT	1" WRENCH FLAT —	\	1/4" NPT	
TO FIT 1 1/2" SEAL  1.985 50.4mm  1/4" NPT 1/2" NPT				
2" Tri-clamp®  1.985 50.4mm  1" WRENCH FLAT				İ
2" Tri-clamp®  1.985 50.4mm  1/4" NPT 1" WRENCH FLAT				00 mm
2" Tri-clamp®  1/4" NPT 1" WRENCH FLAT				1.40
1.985 50.4mm				
1.985 50.4mm				<u> </u>
2" Tri-clamp®  1/4" NPT 1" WRENCH FLAT	OFIT 1 1/2" SEAL	'		
2" Tri-clamp®  1/4" NPT 11" WRENCH FLAT	STILL IN SEAL	1.9	35	
1/4" NPT 1/2" NPT		50.	***************************************	
1/4" NPT 1/2" NPT				
1" WRENCH FLAT	?" Tri-clamp®			
1" WRENCH FLAT			1/4° N	IPT
	1" WRENCH FL	AT ¬	1/2" h	PT
1.400 35.50mm				+
98.5				
				35.5

#### **#20 PRODUCT CODES**

1 <sup>1</sup> / <sub>2</sub> " (40mm)	D980
2"(50mm)	D976



1,000 to 6,000 psi (6,900 to 41,300 kPa)



#### **Description**

Winters compact, lightweight and economical #30 Diaphragm Seal is constructed of AISI 316 stainless steel and is welded together into a one piece unit. The diaphragm offers protection for pressure instruments (gauges and transmitters) from corrosive, contaminated or viscous media.

This CRN registered Diaphragm Seal is ideally suited to applications where space limitations exist.

Specifications		
Housing:	AISI 316 stainless steel	
Diaphragm:	AISI 316L stainless steel, welded	
Minimum Operating	1000 psi (6,900 kPa)	
Pressure:	-	
Maximum Operating	6000 psi (41,300 kPa)	
Pressure:	_	
Gauge Connection:	¹/₄"NPT female standard	
Process Connection:	<sup>1</sup> / <sub>4</sub> "NPT female	
Process Temperature:	-49°F to 302°F (-45°C to 150°C)	

# 1/4" NPT GAUGE CONN. 1/4" NPT GAUGE CONN. 1.340" 34.036mm

#### **#30 PRODUCT CODES**

<sup>1</sup>/<sub>4</sub>" NPT x <sup>1</sup>/<sub>4</sub>" NPT D975



#### 0 to 1000 psi (0 to 6,900 kPa)

# CRN

#### **Description**

Winters Instruments compact (one piece), light-weight and economical #40 Diaphragm Seal is designed to operate between 0 and 1000 psi (6,900 kPa). It is primarily utilized to protect gauges and transmitters from corrosive media.

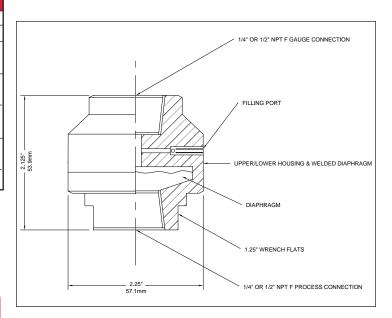
The #40 Diaphragm Seal is ideally suited to applications where space limitations exist. It is also, utilized in many OEM applications.

This compact diaphragm seal is CRN registered.

#### **#40 PRODUCT CODES**

<sup>1</sup> / <sub>4</sub> " NPT x <sup>1</sup> / <sub>4</sub> " NPT	D973
<sup>1</sup> / <sub>4</sub> " NPT x <sup>1</sup> / <sub>2</sub> " NPT	D972
<sup>1</sup> / <sub>2</sub> " NPT x <sup>1</sup> / <sub>2</sub> " NPT	D974

Specifications	
Housing:	AISI 316 stainless steel
Diaphragm:	AISI 316L stainless steel, welded
Minimum Operating	0 psi
Pressure:	
Maximum Operating	1000 psi (6,900 kPa)
Pressure:	-
Gauge Connection:	<sup>1</sup> / <sub>4</sub> " NPT female and <sup>1</sup> / <sub>2</sub> " NPT
	female are standard
Process Connection:	<sup>1</sup> / <sub>4</sub> " NPT female and <sup>1</sup> / <sub>2</sub> " NPT
	female are standard
Process Temperature:	-49°F to 302°F (-45°C to 150°C)





# 40 Diaphragm
Seal attached to a Liquid
Filled Premium Gauge
with a Custom Dial Kg/cm²



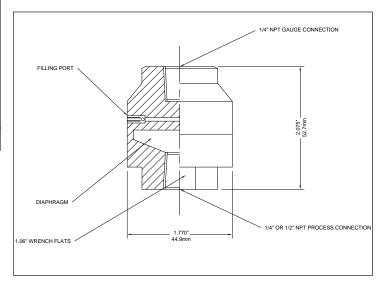
100 to 1000 psi (690 to 6,900 kPa)



#### Description

Winters compact, lightweight and economical #50 Diaphragm Seal is designed to operate between 100 psi (690 kPa) and 1000 psi (6,900 kPa). The diaphragm seal is constructed of AISI 316 stainless steel and is welded together into a one piece unit. This CRN registered #50 Diaphragm Seal is ideally suited to applications where space limitations exist.

Specifications	
Housing:	AISI 316 stainless steel
Diaphragm:	AISI 316L stainless steel
Minimum Operating	100 psi (690 kPa)
Pressure:	-
Maximum Operating	1000 psi (6,900 kPa)
Pressure:	
Gauge Connection:	¹/₄" NPT female
Process Connection:	<sup>1</sup> / <sub>4</sub> " NPT female/male, and
	¹/2" NPT female are standard
Process Temperature:	-49°F to 302°F (-45°C to 150°C)



#### **#50 PRODUCT CODES**

<sup>1</sup> / <sub>4</sub> " NPTF x <sup>1</sup> / <sub>4</sub> " NPTF	D970
<sup>1</sup> / <sub>4</sub> " NPTF x <sup>1</sup> / <sub>4</sub> " NPTM	D971
<sup>1</sup> / <sub>4</sub> " NPTF x <sup>1</sup> / <sub>2</sub> " NPTF	D990



30" Vac to 2,500 psi (-100 to 17,250 kPa)



#### Description

Winters rugged #70 Diaphragm Seal is a two piece construction and designed to withstand even the most severe process applications. The diaphragm is separable for servicing and is available with a ¹/8″ NPT or ¹/4″ NPT flushing connection for removing any material, which may clog the process connection. The diaphragm is constructed of AISI 316L stainless steel and is welded to the upper chamber of the seal for pressures 30 psi (200 kPa) and above; Viton for ranges from 30″ Hg Vacuum (-100 kPa) up to 100 psi (690 kPa). Viton is highly recommended for applications less than 10 psi. The Winters #70 Diaphragm Seal is CRN registered.

40 50 50 20 50 50
110
989

Specifications (St/St Diaphragm)				
Upper Housing:	AISI 316 stainless steel			
Diaphragm/	AISI 316L stainless steel, welded for			
Wetted Parts:	ranges 30 psi (200kPa) and above;			
	Viton for ranges from 30" Hg			
	Vacuum (-100 kPa) up to 100 psi (690			
	kPa)			
Minimum Operating	30" Hg Vacuum (-100kPa)			
Pressure:	-			
Maximum Operating	2,500 psi (17,250 kPa)			
Pressure:				
Gauge Connection:	<sup>1</sup> / <sub>4</sub> " NPT, <sup>1</sup> / <sub>2</sub> " NPT are standard			
<b>Process Connection:</b>	<sup>1</sup> / <sub>4</sub> " NPT, <sup>1</sup> / <sub>2</sub> " NPT, <sup>3</sup> / <sub>4</sub> " NPT and			
	1" NPT are standard			
Flushing Connection:	<sup>1</sup> / <sub>8</sub> " NPT, <sup>1</sup> / <sub>4</sub> " NPT available (optional			
	on all #70 seals)			
Nuts and Bolts:	AISI 316 stainless steel are standard			
<b>Process Temperature:</b>	-49°F to 302°F (-45°C to 150°C)			

Process Gauge Attached to a #70 Seal

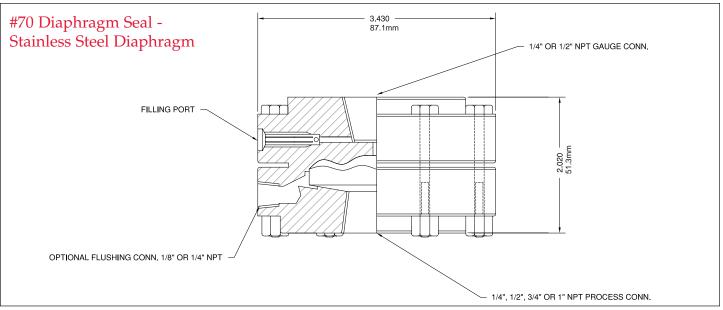


#### **How To Order: Specify Product Code**

Upper Housing (Top)	
316 St/St, 1/4" NPT conn., 316 St/St diaphragm	D950
316 St/St, 1/4" NPT conn., Monel diaphragm	D950M
316 St/St, 1/4" NPT conn., Hastelloy C diaphragm	D950HASC
316 St/St, 1/4" NPT conn., Viton diaphragm	D951
316 St/St, 1/2" NPT conn., 316 St/St diaphragm	D952
316 St/St, 1/2" NPT conn., Monel diaphragm	D952M
316 St/St, 1/2" NPT conn., Hastelloy C diaphragm	D952HASC
316 St/St, 1/2" NPT conn., Viton diaphragm	D953

Options: •SF-D = silicone fill (seal only)
•Teflon Protected Diaphragm

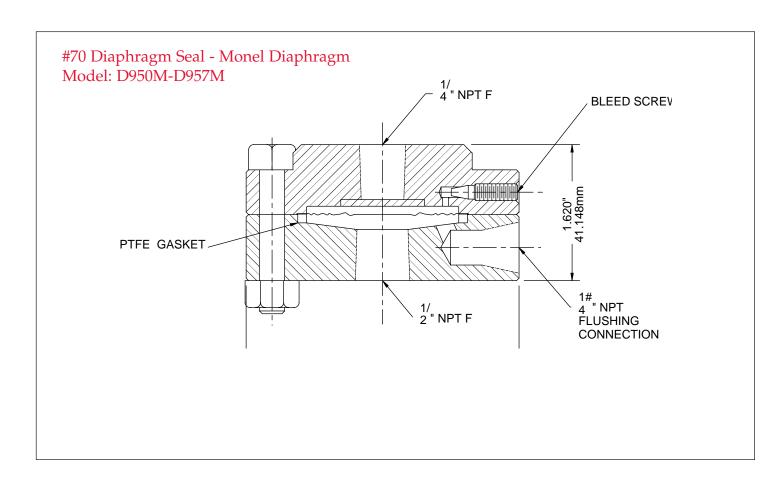
Lower Housing (Botton	n)
316 St/St, 1/4" NPT conn.	D954
316 St/St, 1/2" NPT conn.	D956
316 St/St, 1/2" NPT conn. with flushing	D957
316 St/St, 3/4" NPT conn. with flushing	D959
316 St/St, 3/4" NPT conn.	D963
316 St/St, 1" NPT conn.	D964
316 St/St, 1" NPT conn. with flushing	D965
316 St/St, 1/4" NPT conn., Viton	D954V
316 St/St, 1/2" NPT conn., Viton	D956V
316 St/St, 1/2" NPT conn. with flushing, Viton	D957V
316 St/St, 3/4" NPT conn. with flushing, Viton	D959V
316 St/St, 3/4" NPT conn., Viton	D963V
316 St/St, 1" NPT conn., Viton	D964V
316 St/St, 1" NPT conn. with flushing	D965V
Monel, 1/4" NPT conn.	D954M
Monel, 1/2" NPT conn.	D956M
Monel, 1/2" NPT conn. with flushing	D957M
Monel, 3/4" NPT conn. with flushing	D959M
Monel, 3/4" NPT conn.	D963M
Monel, 1" NPT conn.	D964M
Monel, 1" NPT conn. with flushing	D965M
Hastelloy C, 1/4" NPT conn.	D954HASC
Hastelloy C, 1/2" NPT conn.	D956HASC
Hastelloy C, 1/2" NPT conn. with flushing	
Hastelloy C, 3/4" NPT conn. with flushing	D959HASC
Hastelloy C, 3/4" NPT conn.	D963HASC
Hastelloy C, 1" NPT conn.	D964HASC
Hastelloy C, 1" NPT conn. with flushing	D965HASC





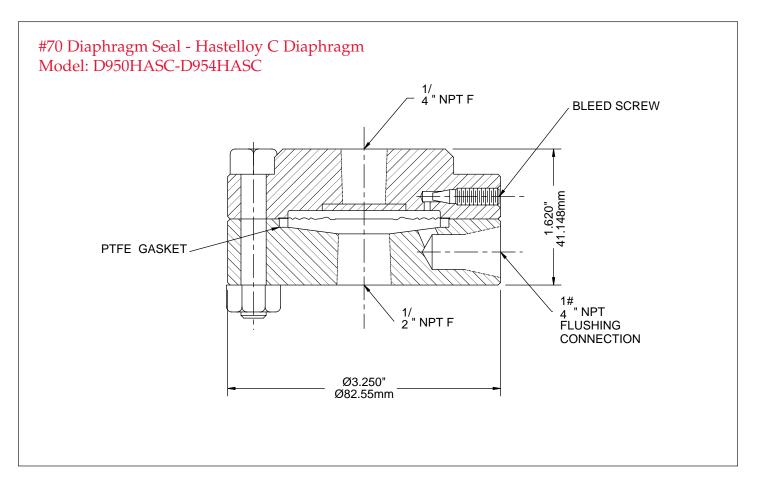
<sup>®</sup> Viton is registered trademark of Dupont Dow Elastomers

Specifications (Monel Diaphragm)			
Housing:	AISI 316 stainless steel (upper)		
Diaphragm/ Wetted Parts:	Monel welded for ranges 30 psi (200kPa) and above; Viton for ranges from 30" Hg Vacuum (-100 kPa) up to 100 psi (690 kPa)		
Minimum Operating Pressure:	30" Hg Vacuum (-100kPa)		
Maximum Operating Pressure:	2,500 psi (17,250 kPa)		
Gauge Connection:	<sup>1</sup> / <sub>4</sub> " NPT, <sup>1</sup> / <sub>2</sub> " NPT are standard		
Process Connection:	<sup>1</sup> / <sub>4</sub> " NPT, <sup>1</sup> / <sub>2</sub> " NPT, <sup>3</sup> / <sub>4</sub> " NPT and 1" NPT are standard		
Flushing Connection:	<sup>1</sup> /s" NPT, <sup>1</sup> / <sub>4</sub> " NPT available (optional on all #70 seals)		
Nuts and Bolts:	St/St/Zinc plated carbon steel		
Process Temperature:	-49°F to 302°F (-45°C to 150°C)		





Specifications	(Hastelloy C Diaphragm)
Housing:	AISI 316 stainless steel (upper)
Diaphragm/ Wetted Parts:	Hastelloy C welded for ranges 30 psi (200kPa) and above; Viton for ranges from 30" Hg Vacuum (-100 kPa) up to 100 psi (690 kPa)
Minimum Operating Pressure:	30" Hg Vacuum (-100kPa)
Maximum Operating Pressure:	(2,500 psi (17,236 kPa)
Gauge Connection:	<sup>1</sup> / <sub>4</sub> " NPT, <sup>1</sup> / <sub>2</sub> " NPT are standard
Process Connection:	<sup>1</sup> / <sub>4</sub> " NPT, <sup>1</sup> / <sub>2</sub> " NPT, <sup>3</sup> / <sub>4</sub> " NPT and 1" NPT are standard
Flushing Connection:	<sup>1</sup> / <sub>8</sub> " NPT, <sup>1</sup> / <sub>4</sub> " NPT available (optional on all #70 seals)
Nuts and Bolts:	St/St/Zinc plated carbon steel
<b>Process Temperature:</b>	-49°F to 302°F (-45°C to 150°C)







#### Description

Winters Instruments Flanged Diaphragm Seal is used in industrial applications such as oil refineries, pulp and paper mills and chemical plants. The flanged diaphragm seal is available in a wide range of materials such as 316 stainless steel, Monel, Hastelloy B & C, Titanium, Tantalum, PVC, Carbon Steel, Teflon and Teflon-lined, 316 stainless steel, and Alloy 20. The diaphragm seals are available in all sizes from 1" (25 mm), 1.5" (40mm) and 2" (50mm) pipe size and #150 and #300 pressure rating standard. (Other configurations available upon request). The flanged diaphragm seal have NPTF available in  $^{1}/_{4}$ ",  $^{1}/_{2}$ ",  $^{3}/_{4}$ ", and 1" connections and are also available with flushing. Saddle diaphragms available upon request.

The flanged diaphragm seals feature continuous use and clean out type for easy cleaning and calibrating. Also, the flanged seals are CRN registered.



Specifications			
Materials:	316 Stainless Steel, Teflon lined 316 Stainless Steel, Monel, Hastelloy C, Tantalum,		
	(Other materials available upon request)		
Housing:	Upper housing - Carbon Steel or 316 Stainless Steel - Lower housing wetted parts as indicated		
Diaphragm:	316 St/St, Tantalum, Hastelloy C (other material available upon request)		
Minimum Operating	21" Hg vacuum		
Pressure:			
Maximum Operating	Limited by the pressure rating of the ANSI flange being utilized		
Pressure:			
Gauge Connection:	1/4" and 1/2" NPT standard		
Process Connection:	1", 1.5" & 2" Pipe size		
Flushing Connection:	Available upon request		
Process Temperature:	Up to 500° F/C		

# How to order: Specify product code PRODUCT CODES

				Carbon Steel	Stainless Steel
Type* Process Conn	Instrument	Diaphragm	Lower Housing	Upper Housing	Upper Housing
/ Press. Rating	Connection	Material	Wetted Parts	Non-Wetted Parts	<b>Non-Wetted Parts</b>
1" - 150#RF					
Welded Diaphragm	1/2" NPT	316 S/S	316 S/S	D1150SS5CS	D1150SS5SS
Welded Diaphragm	1/2" NPT	Tantalum	Teflon Lined - 316 S/S	D1150UL5CS	D1150UL5SS
Welded Diaphragm	1/2" NPT	Hastelloy C	Monel	D1150HM5CS	D1150HM5SS
Welded Diaphragm	1/2" NPT	Hastelloy C	Hastelloy C	D1150HH5CS	D1150HH5SS
Welded Diaphragm	1/4" NPT	316 S/S	316 S/S	D1150SS25CS	D1150SS25SS
Welded Diaphragm	1/4" NPT	Tantalum	Teflon Lined - 316 S/S	D1150UL25CS	D1150UL25SS
Welded Diaphragm	1/4" NPT	Hastelloy C	Monel	D1150HM25CS	D1150HM25SS
Welded Diaphragm	1/4" NPT	Hastelloy C	Hastelloy C	D1150HH25CS	D1150HH25SS
1" - 300#RF					
Welded Diaphragm	1/2" NPT	316 S/S	316 S/S	D1300SS5CS	D1300SS5SS
Welded Diaphragm	1/2" NPT	Tantalum	Teflon Lined - 316 S/S	D1300UL5CS	D1300UL5SS
Welded Diaphragm	1/2" NPT	Hastelloy C	Monel	D1300HM5CS	D1300HM5SS
Welded Diaphragm	1/2" NPT	Hastelloy C	Hastelloy C	D1300HH5CS	D1300HH5SS
Welded Diaphragm	1/4" NPT	316 S/S	316 S/S	D1300SS25CS	D1300SS25SS
Welded Diaphragm	1/4" NPT	Tantalum	Teflon Lined - 316 S/S	D1300UL25CS	D1300UL25SS
Welded Diaphragm	1/4" NPT	Hastelloy C	Monel	D1300HM25CS	D1300HM25SS
Welded Diaphragm	1/4" NPT	Hastelloy C	Hastelloy C	D1300HH25CS	D1300HH25SS



				Carbon Steel	Stainless Steel
Type* Process Conn	Instrument	Diaphragm	Lower Housing	Upper Housing	Upper Housing
/ Press. Rating	Connection	Material	Wetted Parts	Non-Wetted Parts	Non-Wetted Parts
1.5" - 150#RF					
Welded Diaphragm	1/2" NPT	316 S/S	316 S/S	D15150SS5CS	D15150SS5SS
Welded Diaphragm	1/2" NPT	Tantalum	Teflon Lined - 316 S/S	D15150UL5CS	D15150UL5SS
Welded Diaphragm	1/2" NPT	Hastelloy C	Monel	D15150HM5CS	D15150HM5SS
Welded Diaphragm	1/2" NPT	Hastelloy C	Hastelloy C	D15150HH5CS	D15150HH5SS
Welded Diaphragm	1/4" NPT	316 S/S	316 S/S	D15150SS25CS	D15150SS25SS
Welded Diaphragm	1/4" NPT	Tantalum	Teflon Lined - 316 S/S	D15150UL25CS	D15150UL25SS
Welded Diaphragm	1/4" NPT	Hastelloy C	Monel	D15150HM25CS	D15150HM25SS
Welded Diaphragm	1/4" NPT	Hastelloy C	Hastelloy C	D15150HH25CS	D15150HH25SS
1.5" - 300#RF		,			
Welded Diaphragm	1/2" NPT	316 S/S	316 S/S	D15300SS5CS	D15300SS5SS
Welded Diaphragm	1/2" NPT	Tantalum	Teflon Lined - 316 S/S	D15300UL5CS	D15300UL5SS
Welded Diaphragm	1/2" NPT	Hastelloy C	Monel	D15300HM5CS	D15300HM5SS
Welded Diaphragm	1/2" NPT	Hastelloy C	Hastelloy C	D15300HH5CS	D15300HH5SS
Welded Diaphragm	1/4" NPT	316 S/S	316 S/S	D15300SS25CS	D15300SS25SS
Welded Diaphragm	1/4" NPT	Tantalum	Teflon Lined - 316 S/S	D15300UL25CS	D15300UL25SS
Welded Diaphragm	1/4" NPT	Hastelloy C	Monel	D15300HM25CS	D15300HM25SS
Welded Diaphragm	1/4" NPT	Hastelloy C	Hastelloy C	D15300HH25CS	D15300HH25SS
				Carbon Steel	Stainless Steel
Type* Process Conn	Instrument	Diaphragm	Lower Housing	Upper Housing	Upper Housing
/ Press. Rating	Connection	Material	Wetted Parts	Non-Wetted Parts	Non-Wetted Parts
2" - 150#RF					
Welded Diaphragm	1/2" NPT	316 S/S	316 S/S	D2150SS5CS	D2150SS5SS
Welded Diaphragm Welded Diaphragm	1/2" NPT 1/2" NPT	316 S/S Tantalum	316 S/S Teflon Lined - 316 S/S	D2150SS5CS D2150UL5CS	D2150SS5SS D2150UL5SS
		-			
Welded Diaphragm	1/2" NPT	Tantalum	Teflon Lined - 316 S/S	D2150UL5CS	D2150UL5SS
Welded Diaphragm Welded Diaphragm	1/2" NPT 1/2" NPT	Tantalum Hastelloy C	Teflon Lined - 316 S/S Monel	D2150UL5CS D2150HM5CS	D2150UL5SS D2150HM5SS
Welded Diaphragm Welded Diaphragm Welded Diaphragm	1/2" NPT 1/2" NPT 1/2" NPT	Tantalum Hastelloy C Hastelloy C	Teflon Lined - 316 S/S  Monel  Hastelloy C	D2150UL5CS D2150HM5CS D2150HH5CS	D2150UL5SS D2150HM5SS D2150HH5SS
Welded Diaphragm Welded Diaphragm Welded Diaphragm Welded Diaphragm	1/2" NPT 1/2" NPT 1/2" NPT 1/4" NPT	Tantalum Hastelloy C Hastelloy C 316 S/S	Teflon Lined - 316 S/S  Monel  Hastelloy C  316 S/S	D2150UL5CS D2150HM5CS D2150HH5CS D2150SS25CS	D2150UL5SS D2150HM5SS D2150HH5SS D2150SS25SS
Welded Diaphragm Welded Diaphragm Welded Diaphragm Welded Diaphragm Welded Diaphragm	1/2" NPT 1/2" NPT 1/2" NPT 1/4" NPT 1/4" NPT	Tantalum Hastelloy C Hastelloy C 316 S/S Tantalum	Teflon Lined - 316 S/S  Monel  Hastelloy C  316 S/S  Teflon Lined - 316 S/S	D2150UL5CS D2150HM5CS D2150HH5CS D2150SS25CS D2150UL25CS	D2150UL5SS D2150HM5SS D2150HH5SS D2150S25SS D2150UL25SS
Welded Diaphragm Welded Diaphragm Welded Diaphragm Welded Diaphragm Welded Diaphragm Welded Diaphragm	1/2" NPT 1/2" NPT 1/2" NPT 1/4" NPT 1/4" NPT 1/4" NPT	Tantalum Hastelloy C Hastelloy C 316 S/S Tantalum Hastelloy C	Teflon Lined - 316 S/S  Monel  Hastelloy C  316 S/S  Teflon Lined - 316 S/S  Monel	D2150UL5CS D2150HM5CS D2150HH5CS D2150S25CS D2150UL25CS D2150HM25CS	D2150UL5SS D2150HM5SS D2150HH5SS D2150SS25SS D2150UL25SS D2150HM25SS
Welded Diaphragm	1/2" NPT 1/2" NPT 1/2" NPT 1/4" NPT 1/4" NPT 1/4" NPT	Tantalum Hastelloy C Hastelloy C 316 S/S Tantalum Hastelloy C	Teflon Lined - 316 S/S  Monel  Hastelloy C  316 S/S  Teflon Lined - 316 S/S  Monel	D2150UL5CS D2150HM5CS D2150HH5CS D2150S25CS D2150UL25CS D2150HM25CS	D2150UL5SS D2150HM5SS D2150HH5SS D2150SS25SS D2150UL25SS D2150HM25SS
Welded Diaphragm 2" - 300#RF	1/2" NPT 1/2" NPT 1/2" NPT 1/4" NPT 1/4" NPT 1/4" NPT 1/4" NPT	Tantalum Hastelloy C Hastelloy C 316 S/S Tantalum Hastelloy C Hastelloy C	Teflon Lined - 316 S/S  Monel  Hastelloy C  316 S/S  Teflon Lined - 316 S/S  Monel  Hastelloy C	D2150UL5CS D2150HM5CS D2150HH5CS D2150SS25CS D2150UL25CS D2150HM25CS D2150HH25CS	D2150UL5SS D2150HM5SS D2150HH5SS D2150S25SS D2150UL25SS D2150HM25SS D2150HH25SS
Welded Diaphragm 2" - 300#RF Welded Diaphragm	1/2" NPT 1/2" NPT 1/2" NPT 1/4" NPT 1/4" NPT 1/4" NPT 1/4" NPT 1/4" NPT	Tantalum Hastelloy C Hastelloy C 316 S/S Tantalum Hastelloy C Hastelloy C	Teflon Lined - 316 S/S  Monel  Hastelloy C  316 S/S  Teflon Lined - 316 S/S  Monel  Hastelloy C  316 S/S	D2150UL5CS D2150HM5CS D2150HH5CS D2150SS25CS D2150UL25CS D2150HM25CS D2150HH25CS D2300SS5CS	D2150UL5SS D2150HM5SS D2150HH5SS D2150S25SS D2150UL25SS D2150HM25SS D2150HH25SS
Welded Diaphragm 2" - 300#RF Welded Diaphragm Welded Diaphragm	1/2" NPT 1/2" NPT 1/2" NPT 1/4" NPT 1/4" NPT 1/4" NPT 1/4" NPT 1/4" NPT 1/2" NPT	Tantalum Hastelloy C Hastelloy C 316 S/S Tantalum Hastelloy C Hastelloy C Tantalum Tantalum Hastelloy C	Teflon Lined - 316 S/S  Monel  Hastelloy C  316 S/S  Teflon Lined - 316 S/S  Monel  Hastelloy C  316 S/S  Teflon Lined - 316 S/S  Monel	D2150UL5CS D2150HM5CS D2150HH5CS D2150SS25CS D2150UL25CS D2150HM25CS D2150HH25CS D2300SS5CS D2300UL5CS	D2150UL5SS D2150HM5SS D2150HH5SS D2150S25SS D2150UL25SS D2150HM25SS D2150HH25SS D2300SS5SS D2300UL5SS
Welded Diaphragm 2" - 300#RF Welded Diaphragm Welded Diaphragm Welded Diaphragm Welded Diaphragm	1/2" NPT 1/2" NPT 1/2" NPT 1/4" NPT 1/4" NPT 1/4" NPT 1/4" NPT 1/4" NPT 1/2" NPT 1/2" NPT 1/2" NPT	Tantalum Hastelloy C Hastelloy C 316 S/S Tantalum Hastelloy C Hastelloy C Tantalum Hastelloy C Hastelloy C	Teflon Lined - 316 S/S  Monel  Hastelloy C  316 S/S  Teflon Lined - 316 S/S  Monel  Hastelloy C  316 S/S  Teflon Lined - 316 S/S	D2150UL5CS D2150HM5CS D2150HH5CS D2150SS25CS D2150UL25CS D2150HM25CS D2150HH25CS D2300SS5CS D2300UL5CS D2300HM5CS	D2150UL5SS D2150HM5SS D2150HH5SS D2150S25SS D2150UL25SS D2150HM25SS D2150HH25SS D2300SS5SS D2300UL5SS D2300HM5SS
Welded Diaphragm 2" - 300#RF Welded Diaphragm Welded Diaphragm Welded Diaphragm	1/2" NPT 1/2" NPT 1/2" NPT 1/4" NPT 1/4" NPT 1/4" NPT 1/4" NPT 1/4" NPT 1/2" NPT 1/2" NPT 1/2" NPT 1/2" NPT 1/2" NPT	Tantalum Hastelloy C Hastelloy C 316 S/S Tantalum Hastelloy C Hastelloy C Tantalum Hastelloy C Hastelloy C Hastelloy C Tantalum Hastelloy C Hastelloy C	Teflon Lined - 316 S/S  Monel  Hastelloy C  316 S/S  Teflon Lined - 316 S/S  Monel  Hastelloy C  316 S/S  Teflon Lined - 316 S/S  Monel  Hastelloy C	D2150UL5CS D2150HM5CS D2150HH5CS D2150SS25CS D2150UL25CS D2150HM25CS D2150HH25CS D2300SS5CS D2300UL5CS D2300HM5CS D2300HH5CS	D2150UL5SS D2150HM5SS D2150HH5SS D2150S25SS D2150UL25SS D2150HM25SS D2150HH25SS D2300SS5SS D2300UL5SS D2300HM5SS D2300HH5SS
Welded Diaphragm Z" - 300#RF Welded Diaphragm Welded Diaphragm Welded Diaphragm Welded Diaphragm Welded Diaphragm Welded Diaphragm	1/2" NPT 1/2" NPT 1/2" NPT 1/4" NPT 1/4" NPT 1/4" NPT 1/4" NPT 1/2" NPT	Tantalum Hastelloy C Hastelloy C 316 S/S Tantalum Hastelloy C Hastelloy C Hastelloy C Hastelloy C Tantalum Hastelloy C Hastelloy C Hastelloy C Hastelloy C	Teflon Lined - 316 S/S  Monel  Hastelloy C  316 S/S  Teflon Lined - 316 S/S  Monel  Hastelloy C  316 S/S  Teflon Lined - 316 S/S  Monel  Hastelloy C  316 S/S  Monel  Hastelloy C  316 S/S	D2150UL5CS D2150HM5CS D2150HH5CS D2150SS25CS D2150UL25CS D2150HM25CS D2150HH25CS D2300SS5CS D2300UL5CS D2300HM5CS D2300HH5CS D2300SS25CS	D2150UL5SS D2150HM5SS D2150HH5SS D2150S25SS D2150UL25SS D2150HM25SS D2150HH25SS D2300SS5SS D2300UL5SS D2300HM5SS D2300HH5SS D2300SS25SS



\*Replaceable and Teflon Diaphragms available • Other materials, pipe size and pressure ratings available upon request

#### #80 Flanged Diaphragm Seal

All Winters Flanged Diaphragm seals are continuous type for safety. This feature is critical especially when a diaphragm seal is utilized in a hazardous location. With the flange seal construction, the diaphragm seal will aid in containing the process media should the pressure instrument be accidentally broken or removed. This is very important, should the process media be either a corrosive or a harmful gas. With continuous use diaphragm seals, you decide when is a convenient time to shut down the process line and • Flange is recessed for gasket, so the gasket cannot be replace the damaged pressure instrument.

Also, the flanged diaphragm seals are clean out types meaning the bolts can be removed and separated at the flanges for cleaning, liquid filling, calibrating and welding, etc without the loss of liquid fill fluid.

All Winters Flanged Diaphragm seals are welded at its periphery to the instrument flange in order to retain the liquid fill fluid and reduce the risk of leakage.

#### **Unique Features**

- Addition of spoke corrugations to the radial corrugations. The spoke corrugations reduce hoop stress in the metal thus enabling the medal diaphragm to flex more readily and allow more displacement of the liquid fill fluid (i.e. the diaphragm seal is more sensitive)
- · O-ring gasket of the diaphragm insures minimal possibility of leakage of the liquid fill fluid when properly installed, operated and maintained
- damaged
- A self energized gasket is utilized to pressure load the process gasket surface; the greater the process pressure, the greater the sealing pressure
- Due to high pressure, flanges may separate slightly from stretch of bolts; the process flange gasket pressure on sealing surfaces remains constant thus preventing leakage

