Data Sheet
SS/S264_3

FieldIT

2600T Series Pressure Transmitters

Models S264 Remote Seals

- **Wide range of remote seal types**
  - allow optimum design for each application without compromise of performance
- **Large selection of options, materials and fill fluids**
  - meet nearly all process requirements
- **All welded constructions**
  - combine an economically feasible and technically sound solution ensuring total reliability at line pressure down to full vacuum
- **Special designed remote seals for individual process solutions**
  - add flexibility for most demanding services

ABB 2600T Series
Engineered solutions
for all applications

Remote Seals Overview

The S26 seals are used in combination with 2600T transmitters, allowing differential, gauge or absolute pressure measurements. Connection of the seal(s) to the relevant transmitter can be achieved as follows :

- directly mounted with a short capillary connecting the "integral" seal to the transmitter sensor;
- through a capillary system which link the transmitter sensor to a "remote" seal of any version.

Using remote seal the transmitter can be selected with

- two seals using same fill fluid, capillary and diaphragm size
- one seal having the other side configured with a process flange for wet/dry leg connection or a blind flange providing vacuum or atmospheric reference.

Model 264HR/NR transmitters have always one remote seal only, with a selectable reference to atmosphere or vacuum respectively for gauge or absolute pressure measurements.

The S26 Series Seal System is a protective device used to isolate 2600T series transmitters from the process fluid.

The seal system provides a flexible diaphragm seal between the process fluid and a liquid filled capillary tube connected to the body of the transmitter. The diaphragm isolates the process fluid while the filled capillary tube hydraulically transmits the process pressure to the transmitter sensor. The capillary of remote seal is corrosion-resistant with robust costruction in stainless steel with spiral armour protection, also PVC jacket; PVC protection is always recommended except for high temperature application, where stainless steel armour is suggested.

The all welded construction assures reliable operation over the widest range of operating temperature and under vacuum conditions.

For certain applications, use of seal is necessary to prevent the process fluid from leaving its enclosure, due to reasons such as :

- the process fluid has solids in suspension or is highly viscous and can foul impulse lines.
- the process fluid can solidify in impulse lines or the transmitter.
- the process fluid is too hazardous to enter the control area where the transmitter is located.
- the process temperature exceeds the recommended limits for the transmitter.
- the application is interface level or density measurement. Remote seals offer the required constant and equal specific gravity of the pressure transfer fluid on the high and low sides of the transmitter.
- the transmitter must be located away from the process for easier maintenance.

The S26 series is available with process connections for ANSI or DIN pipe flanges, wedge flow elements, chemical tees, and threaded pipe fittings. Extended diaphragm remote seals, suitable for connection to 2in - 3in or 4in flanged tank nozzles or flanged tees, permit the seal diaphragm to be located flush with the inside of a tank or pipe. Sanitary type seals meet the stringent requirements of sanitary food, dairy, pharmaceutical and Bio Tech applications, offering FDA approved fillings and compliance with 3-A Sanitary Standards.

Fill fluids with FDA are defined as food fills and are Generally Recognized As Safe (GRAS) by the US Food and Drug Administration (FDA).

Seal system selection criteria

Application of an S26 system in direct mount or remote seal configuration to 2600T transmitters affects performances of original devices. Effects are evident in:

- Accuracy
- Temperature effects
- Dynamic response

• Accuracy

Accuracy is only marginally affected when seal diaphragm stiffness is relevant compared with sensor stiffness. This is the only characteristic of the S26 system which has role on accuracy performance. High stiffness of diaphragm associated with low URL might produce increased errors of linearity, hysteresis, and long term stability; when diaphragm stiffness is accuracy related also temperature effects are significantly affected. Some basic considerations on diaphragm stiffness help understanding effects introduced by S26 system associated with transmitters. This is physically defined by the ratio between the pressure variation applied to the diaphragm and the corresponding volume variation. The stiffness is not linear along the whole diaphragm volumetric displacement, but the S26 design is such to maintain the system linear within the service conditions of the transmitter such as:

- Operating pressure range
- Operating static pressure (for differential transmitters)
- Ambient & process temperature limits

Diaphragm stiffness is a function of material & thickness (elastic coefficient), diameter (type), convolution shape and geometry (design defined)

• Temperature effects

S26 system has effect on temperature performance of the complete transmitter. This effect is mostly on zero of the instrument and is produced by the expansion of the fill fluid into the closed volume formed by the transmitter flange cavity the capillary volume and the remote seal volume. This volume filled with a fluid with specific expansion coefficient; change in temperature of the measuring device produce a volume variation which is absorbed by the remote diaphragm, whose stiffness produces a change in the fluid pressure: this is the zero error. In real application the transmitter/seal system is not the same and stable temperature. Therefore the errors referred in this document for each type of diaphragm and different fluids should be taken as a reference for qualitatively evaluation and not a true behaviour in normal application conditions. Should again be recognized that the stiffness of diaphragm and in this case, the thermal coefficient of fluid are the parameter to take into account.

• Time response

Application of S26 seal to transmitters increases the original time response. The amount of the increase depends from the number of elements and condition of the instrument as follows :

- transmitter sensor range
- physical configuration (i.e. a remote seal on other side)
- type of measure/number of seal (one or two)
- fill fluid viscosity of the S26 system applied
- ambient temperature (affects the transmitter and the capillary) and process temperature on the seal diaphragm
- capillary length

The delay introduced by the seal may be considered as an added constant time to the one of the associated transmitter
For obtaining the best application solution :

- choose sensor code with URL closest to application SPAN
- select largest diameter diaphragm seal related to URL.
- keep the capillary length as short as possible
- select the fill fluid that suits the most extreme process conditions expected (highest temperature and lowest pressure) and it is compatible with the process fluid.
- In vacuum application, choose always the all welded version and mount the transmitter primary 30 cm/12 inches or more below the bottom seal connection.
- In a two-seal system use the same diaphragm size, capillary length and fill fluid on each side of the transmitter.

Ordering Information

The transmitter and each seal system are each identified by a product code number. These code numbers are stamped on the transmitter nameplate and each character identifies specific product features. Refer to ordering information for a detailed explanation of the product code numbers.
A typical example of the product code stamping is as follows :

Transmitter Product Code 264DRFSSA1AH–V1E1D3
Seal System Product Code S264WHBCDFSBEH1

Industrial application in chemical, sanitary, food and any other process industries may require seal configurations and/or process connection different from those reported in this document. Each “special” should be evaluated by ABB to check the correctness and its level of functionality.
Ask for the “S26 series seal form” to define precisely the measuring problem and application requirements.
The following table shows the types of standard seals considered in this leaflet.

The mnemonics will be used as shortest cross references with the transmitter data sheet which should be read in conjunction with this data sheet.

Model	Seal type	Size	Mnemonic
S264W	Wafer Wafer (food)	1 ½in / DN40 2in / DN50 3in / DN80	P1.5 P2 P3
S264C	Chemical tee flanged	3in	P3
S264F	Flanged flush diaphragm	2in / DN50 3-4in / DN80-100	P2 P3
	Flanged extended diaphragm	2in / DN50 3in / DN80 4in / DN100	E2 E3 P3
S264U	Union	1 ½n	P1.5
S264T	Threaded off-line	2 ½in	T2.5
S264M	Flanged off-line	2 ½n	T2.5
S264S	Union nut Triclamp Cherry Burrel Sanitary, Aseptic	2in / F50 3in / F80 4in	S2 S3 S3
S264B	Button	1in	B1
S264P	Urea service flanged	1 ½in 2 ½in	U1.5 U2.5

ABB can also cooperate with you by developing a special remote seal for problems requiring individual solutions.
Please contact your local ABB office or representative for additional information.

FILL FLUID CHARACTERISTICS (Table A)

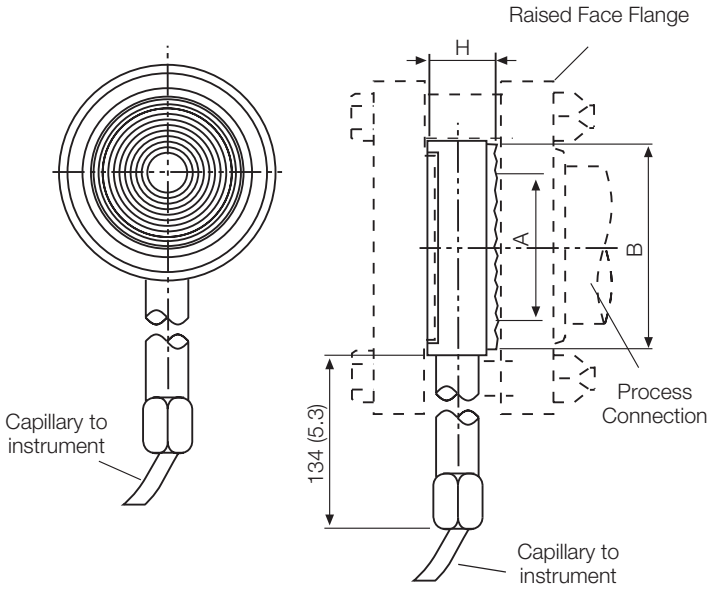
FILL FLUIDS (APPLICATION)	OPERATING CONDITIONS				SPECIFICATION AT 25° C (77° F)		
	Tmax @ Pabs>of	Pmin mbar abs (psia)	Tmax @ P min	Tmin	Specific gravity	Kinematic viscosity (cSt)	Thermal expansion (x 10^{-3} / ° C)
Silicone oil-DC200™ (General purpose)	200 (390) @ 35mbar	0.7 (0.01)	160 (320)	–40 (–40)	0.934	10	1.08
Silicone oil-AN140™ (High temperature)	380 (716) @ 1bar	0.7 (0.01)	300 (572)	–5 (+23)	1.07	40	0.64
Silicone Polymer–Syltherm XLT™ (Low temperature)	100 (212) @ 110mbar	2 (0.03)	20 (68)	–100 (–148)	0.852	1.4	1
Vegetable oil-Neobee M-20™ (Food-Sanitary) FDA	200 (390) @ 1bar	130 (1.9)	150 (300)	-18 (0)	0.92	9.8	1.2
Glycerin Water (70%) (Food-Sanitary) FDA	93 (200) @ 1bar	1000 (14.5)	93 (200)	–7 (+20)	1.08	2.2	0.36
Mineral oil-MARCOL 82™ (Food-Sanitary) FDA	200 (390) @ 200mbar	33 (0.5)	40 (104)	–40 (–40)	0.84	26	1.04
Inert – Galden™ (Oxygen Service)	160 (320) @ 1bar	0.7 (0.01)	65 (150)	-18 (0)	1.82	9	1.1
Inert – Halocarbon™ 4.2 (Oxygen Service)	180 (356) @ 400mbar	4 (0.06)	70 (158)	-20 (-4)	1.87	6.3	0.864
ABB fill (Paints and specials)	300 (572) @ 400mbar	0.7 (0.01)	160 (320)	-10 (+14)	1.04	16	0.92

Absolute viscosity (cP) = Kinematic Viscosity (cSt) x Specific gravity at specified temperature.
The absolute viscosity value is used for response time calculation.

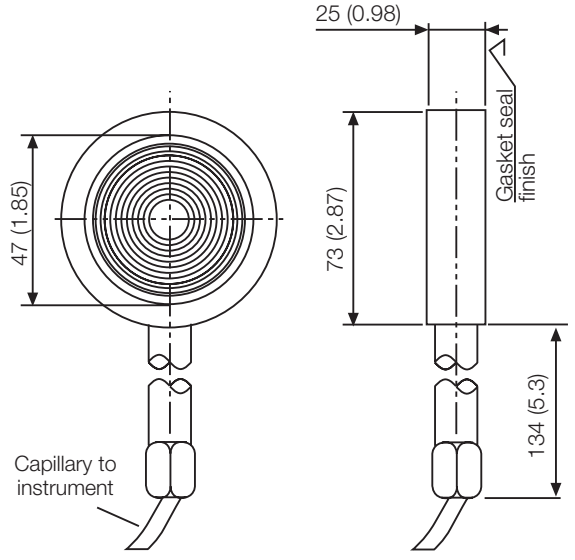
SEALS DIMENSIONS ON FOLLOWING PAGES ARE IN mm (in)

S264W Model Wafer Remote Seal

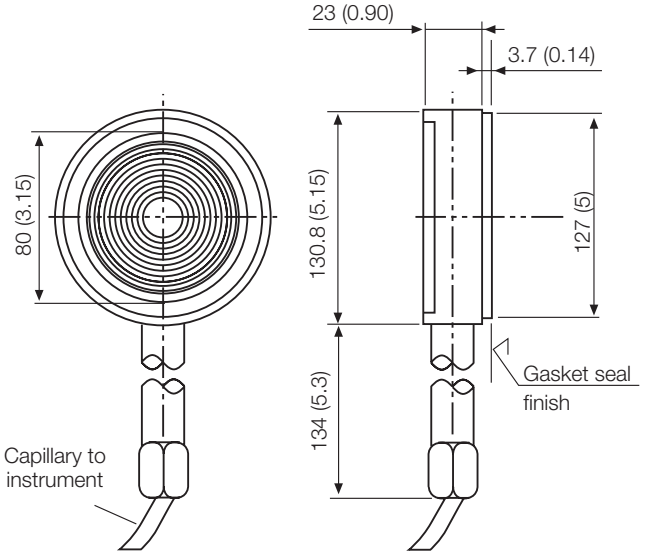
The wafer remote seal is designed to be clamped between two ANSI or DIN raised face flanges. The diaphragm side of the seal faces the process flange and a blind back-up flange is used on the other side of the seal.
The wafer variant is also available as food design for 1½in and 3in sizes.



Size	DIMENSIONS mm (in)		
	A (dia)	B (dia)	H
1 ½in	47 (1.85)	73.2 (2.87)	23 (0.9)
2in	60 (2.36)	92.1 (3.62)	23 (0.9)
3in	89 (3.5)	127 (5)	23 (0.9)
DN 40	47 (1.85)	88 (3.46)	23 (0.9)
DN 50	60 (2.36)	102 (4.02)	23 (0.9)
DN 80	89 (3.5)	138 (5.43)	23 (0.9)



1 ½in wafer food design



3in wafer food design

Maximum Working Pressure

WAFER SEAL ELEMENT : 16 MPa, 160 bar, 2320 psi but not greater than the backup flange rating (not supplied).

Vacuum Service

Full vacuum subject to fill fluid limits. Refer to table A.

Minimum pressure with tantalum diaphragm is 1kPa abs, 10mbar abs, 0.15psia.

Process Temperature Limits

Same as fill fluid limits. Refer to table A.

260°C (500°F) for Tantalum diaphragm.

204°C (400°F) for use with Teflon anti-stick coating.

Gasket seat finish

smooth (RF or DIN): 0.8µm (32AARH)

serrated (RF): 3.2 to 6.3µm (125 to 250AARH)

Form C (DIN 2526): 160RZ

Form E (DIN 2526): 16RZ

Temperature effect

The following table shows the temperature effect for 20K (36°F) change, detailed separately for

a) the seal (one element)

b) the capillary per meter

c) the system (transmitter sensor when combined with a seal of specific size/type)

referred to silicone oil (DC 200) filling and AISI 316 L ss diaphragm materials.

For filling different from silicone oil (DC200) the errors can be multiplied by the thermal expansion coefficient listed in the fill fluid characteristics table.

THE ERRORS IN TABLE CAN BE CONSIDERED DIVIDED BY 4 FOR TRANSMITTERS USING SAME REMOTE SEAL ON THE TWO SIDES

Wafer Seal Size	Seal error	1m Capillary Error	System (Sensor) Error
1 ½in / DN 40	0.87kPa, 8.7mbar, 3.5inH_2O	0.3kPa, 3mbar, 1.2inH_2O	0.9kPa, 9mbar, 3.6inH_2O
2in / DN 50	0.29kPa, 2.9mbar, 1.16inH_2O	0.07kPa, 0.7mbar, 0.28inH_2O	0.2kPa, 2mbar, 0.8inH_2O
3in / DN 80	0.09kPa, 0.9mbar, 0.36inH_2O	0.03kPa, 0.3mbar, 0.12inH_2O	0.03kPa, 0.3mbar, 0.12inH_2O

BASIC ORDERING INFORMATION model S264W Wafer Remote Seal

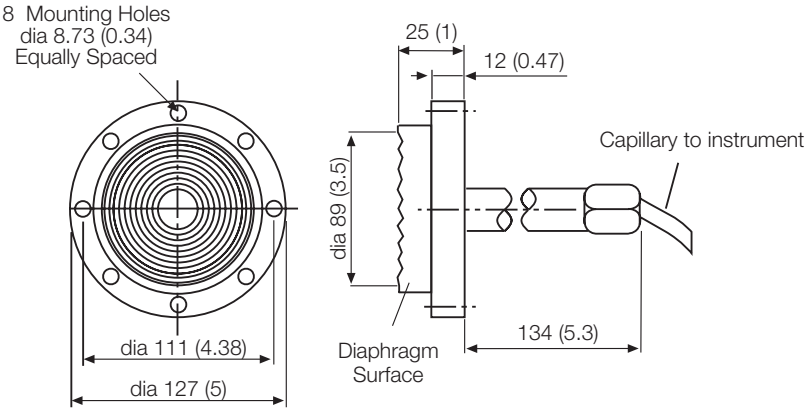
Select one character or set of characters from each category and specify complete catalog number.

BASE MODEL – 1st to 5th characters		**S**	**2**	**6**	**4**	**W**	**X**	**X**	**X**	**X**	**F**	**X**	**X**	**X**	**X**	**X**
Wafer Remote Seal																				
Transmitter side of connection – 6th character																				
High side							H													
Low side							L													
Centering system – 7th character																				
Seat on back diameter (suitable fot RF backup flange)								B												
Size – 8th character																				
1 1/2in ANSI									A											
2in ANSI									B											
3in ANSI									C											
1 1/2in ANSI food design									1											
3in ANSI food design									2											
DIN DN40									D											
DIN DN50									E											
DIN DN80									F											
Seat finish – 9th character																				
Serrated finish (suitable for RF)	(Notes 1, 3)									D										
Smooth finish (suitable for RF)	(Note 1)									E										
Serrated finish to DIN 2526 Form C (up to PN40)	(Notes 2, 3)									R										
Serrated finish to DIN 2526 Form E (PN64 to PN160)	(Notes 2, 3)									S										
Smooth finish (suitable for DIN)	(Notes 2, 3)									T										
Use code – 10th character																				
Diaphragm material – 11th character																				
AISI 316 L ss								NACE				S								
Hastelloy C276™	(Note 4)							NACE				H								
Tantalum	(Note 4)											T								
AISI 316 L ss with anti–stick coating	(Notes 4, 5)							NACE				K								
Hastelloy C276™ with anti–stick coating	(Notes 4, 5)							NACE				Y								
AISI 316 L ss with anti-corrosion and anti-stick coating	(Notes 4, 6)							NACE				W								
Capillary protection – 12th character																				
AISI 316 ss armour	(RECOMMENDED FOR HIGH TEMPERATURE)												A							
AISI 316 ss armour with PVC protective cover													B							
Capillary length m (feet) – 13th character																				
1 (3)														A						
1.5 (5)														B						
2 (7)														C						
2.5 (8)														D						
3 (10)														E						
3.5 (12)														F						
4 (13)														G						
4.5 (15)														H						
5 (17)														J						
5.5 (18)														K						
6 (20)														L						
6.5 (22)														M						
7 (23.5)														N						
7.5 (25)														P						
8 (27)														Q						
9 (30)														R						
10 (33)														S						
12 (40)														T						
14 (47)														U						
16 (53)														V						
Fill fluid – 14th character																				
Silicone oil																	S			
Inert fluid - Galden	(Notes 3, 7)																N			
Inert fluid - Halocarbon	(Notes 3, 7)																D			
ABB fill	(Note 3)																K			
Sllicone oil for high temperature	(Note 3)																H			
Silicone polymer for low temperature	(Note 3)																C			
Mineral oil (FDA approved)	(Note 8)																W			
Vegetable oil (FDA approved)	(Note 8)																A			
Glycerin-water (FDA approved)	(Note 8)																B			
Certification – 15th character																				
None																				1
Zone "0" protection	(Note 9)																			2

Note 1: Not available with DIN size code D, E, F
Note 2: Not available with ANSI size code A, B, C
Note 3: Not available with food design size code 1, 2
Note 4: Not available with serrated seat code D, R, S
Note 5: Not available with size code A, B, D, E, F, 1, 2
Note 6: Not available with size code A, D, 1, 2
Note 7: Suitable for oxygen service
Note 8: Suitable for food application
Note 9: Not available with diaphragm material code K, Y

S264C Model Chemical Tee Remote Seal

The chemical tee remote seal is designed to connect to a Wedge Flow Element or to any process fitting with appropriate mating condition.
Chemical tee elements cannot be connected to a standard ANSI or DIN pipe flange.



Maximum Working Pressure

2 MPa, 20 bar, 300 psi

Vacuum Service

Full vacuum subject to fill fluid limits.

Refer to table A.

Process Temperature Limits

Same as fill fluid limits. Refer to table A.

204°C (400°F) for use with Teflon anti-stick coating.

204°C (400°F) with PTFE gasket

340°C (645°F) with graphite gasket

Temperature effect

The following table shows the temperature effect for 20K (36°F) change, detailed separately for

a) the seal (one element)

b) the capillary per meter

c) the system (transmitter sensor when combined with a seal of specific size/type)

referred to silicone oil (DC 200) filling and AISI 316 L ss diaphragm materials.

For filling different from silicone oil (DC200) the errors can be multiplied by the thermal expansion coefficient listed in the fill fluid characteristics table.

THE ERRORS IN TABLE CAN BE CONSIDERED DIVIDED BY 4 FOR TRANSMITTERS USING SAME REMOTE SEAL ON THE TWO SIDES

Chemical Tee Seal Size	Seal error	1m Capillary Error	System (Sensor) Error
3in	0.09kPa, 0.9mbar, 0.36inH_2O	0.03kPa, 0.3mbar, 0.12inH_2O	0.03kPa, 0.3mbar, 0.12inH_2O

BASIC ORDERING INFORMATION model S264C Chemical Tee Remote Seal

Select one character or set of characters from each category and specify complete catalog number.

BASE MODEL – 1st to 5th characters		**S**	**2**	**6**	**4**	**C**	**X**	**X**	**X**	**P**	**X**	**X**	**X**	**X**	**X**
Chemical Tee Remote Seal																			
Transmitter side of connection – 6th character																			
High side							H												
Low side							L												
Mounting flange – 7th character																			
Integral with seal								P											
Size – 8th character																			
3in (proprietary standard; 20bar rating)									G										
Use code – 9th character																			
Diaphragm material – 10th character																			
AISI 316 L ss							NACE				S								
Hastelloy C276™											H								
AISI 316 L ss with anti–stick coating							NACE				K								
Hastelloy C276™ with anti–stick coating							NACE				Y								
AISI 316 L ss with anti-corrosion and anti-stick coating							NACE				W								
Capillary protection – 11th character																			
AISI 316 ss armour	(RECOMMENDED FOR HIGH TEMPERATURE)											A							
AISI 316 ss armour with PVC protective cover												B							
Capillary length m (feet) – 12th character																			
1 (3)													A						
1.5 (5)													B						
2 (7)													C						
2.5 (8)													D						
3 (10)													E						
3.5 (12)													F						
4 (13)													G						
4.5 (15)													H						
5 (17)													J						
5.5 (18)													K						
6 (20)													L						
6.5 (22)													M						
7 (23.5)													N						
7.5 (25)													P						
8 (27)													Q						
9 (30)													R						
10 (33)													S						
Fill fluid – 13th character																			
Silicone oil														S					
Inert fluid - Galden	(Note 1)													N					
Inert fluid - Halocarbon	(Note 1)													D					
ABB fill														K					
Sllicone oil for high temperature														H					
Silicone polymer for low temperature														C					
Mineral oil (FDA approved)	(Note 2)													W					
Vegetable oil (FDA approved)	(Note 2)													A					
Glycerin-water (FDA approved)	(Note 2)													B					
Gasket – 14th character																			
None																			1
PTFE with Silica filter																			6
Graphite																			7

Note 1: Suitable for oxygen service

Note 2: Suitable for food application

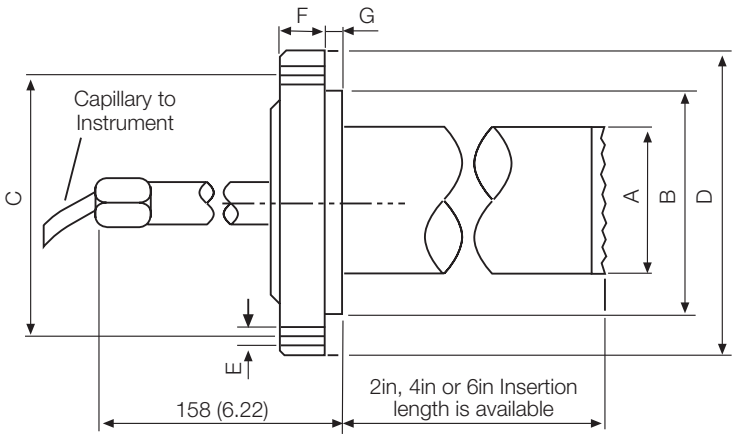
™ Hastelloy is a Cabot Corporation trademark

™ Galden is a Montefluos trademark

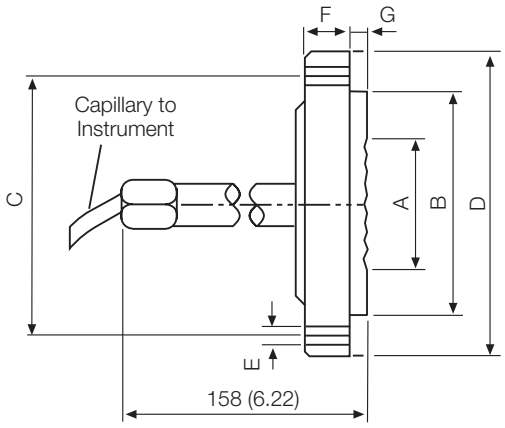
™ Halocarbon is a Halocarbon Products Co. trademark

S264F Model Flanged Extended and Flush Diaphragm Remote Seal

The extended and flush diaphragm remote seal is designed to connect to ANSI or DIN flanged pipe fitting. For liquid level measurement installations the seal connects to an ANSI or DIN flanged tank nozzle (Schedule 40).



Flanged Extended Diaphragm Seal



Flanged Flush Diaphragm Seal

Size/Rating	Dimensions mm (in)								N° of holes
	A (dia)		B (dia)	C (dia)	D (dia)	E (dia)	F	G	
	flush	extended							
2in ANSI CL 150	60 (2.36)	48 (1.9)	92.1 (3.62)	120.5 (4.74)	152.5 (6)	20 (0.79)	19.5 (0.77)	9.5 (0.37)	4
2in ANSI CL 300	60 (2.36)	48 (1.9)	92.1 (3.62)	127 (5)	165 (6.5)	20 (0.79)	22.5 (0.88)	9.5 (0.37)	8
2in ANSI CL 600	60 (2.36)	NA	92.1 (3.62)	127 (5)	165 (6.5)	20 (0.79)	25.5 (1)	9.5 (0.37)	8
2in ANSI CL 900	60 (2.36)	NA	92.1 (3.62)	165 (6.5)	216 (8.5)	26 (1.02)	38.5 (1.51)	9.5 (0.37)	8
3in ANSI CL 150	89 (3.5)	72 (2.83)	127 (5)	152.5 (6)	190.5 (7.5)	20 (0.79)	24 (0.94)	9.5 (0.37)	4
3in ANSI CL 300	89 (3.5)	72 (2.83)	127 (5)	168.5 (6.63)	210 (8.26)	22 (0.86)	28.5 (1.12)	9.5 (0.37)	8
3in ANSI CL 600	89 (3.5)	NA	127 (5)	168.5 (6.63)	210 (8.26)	22 (0.86)	32 (1.26)	9.5 (0.37)	8
3in ANSI CL 900	89 (3.5)	NA	127 (5)	190.5 (7.5)	241 (9.48)	26 (1.02)	38.5 (1.51)	9.5 (0.37)	8
4in ANSI CL 150	89 (3.5)	94 (3.7)	157.2 (6.2)	190.5 (7.5)	228.6 (9)	20 (0.79)	24 (0.94)	9.5 (0.37)	8
4in ANSI CL 300	89 (3.5)	94 (3.7)	157.2 (6.2)	200.2 (7.88)	254 (10)	22 (0.86)	32 (1.26)	9.5 (0.37)	8
DN50 DIN PN16	60 (2.36)	48 (1.9)	102 (4.02)	125 (4.92)	165 (6.5)	18 (0.71)	20 (0.79)	9.5 (0.37)	4
DN50 DIN PN40	60 (2.36)	48 (1.9)	102 (4.02)	125 (4.92)	165 (6.5)	18 (0.71)	20 (0.79)	9.5 (0.37)	4
DN50 DIN PN64	60 (2.36)	NA	102 (4.02)	135 (5.31)	180 (7.08)	22 (0.86)	26 (1.02)	9.5 (0.37)	4
DN50 DIN PN100	60 (2.36)	NA	102 (4.02)	145 (5.71)	195 (7.67)	26 (1.02)	28 (1.1)	9.5 (0.37)	4
DN50 DIN PN160	60 (2.36)	NA	102 (4.02)	145 (5.71)	195 (7.67)	26 (1.02)	30 (1.18)	9.5 (0.37)	4
DN80 DIN PN16	89 (3.5)	72 (2.83)	138 (5.43)	160 (6.3)	200 (7.87)	18 (0.71)	20 (0.79)	9.5 (0.37)	8
DN80 DIN PN40	89 (3.5)	72 (2.83)	138 (5.43)	160 (6.3)	200 (7.87)	18 (0.71)	24 (0.94)	9.5 (0.37)	8
DN80 DIN PN64	89 (3.5)	NA	138 (5.43)	170 (6.7)	215 (8.46)	22 (0.86)	28 (1.1)	9.5 (0.37)	8
DN80 DIN PN100	89 (3.5)	NA	138 (5.43)	180 (7.08)	230 (9.05)	26 (1.02)	32 (1.26)	9.5 (0.37)	8
DN80 DIN PN160	89 (3.5)	NA	138 (5.43)	180 (7.08)	230 (9.05)	26 (1.02)	36 (1.42)	9.5 (0.37)	8
DN100 DIN PN16	89 (3.5)	94 (3.7)	158 (6.22)	180 (7.08)	220 (8.66)	18 (0.71)	20 (0.79)	9.5 (0.37)	8
DN100 DIN PN40	89 (3.5)	94 (3.7)	162 (6.38)	190 (7.48)	235 (9.25)	22 (0.86)	24 (0.94)	9.5 (0.37)	8

Maximum Working Pressure (20 to 120°C; 68 to 248°F)

ANSI CL 150 : 2 MPa, 20 bar, 290 psi

ANSI CL 300 : 5 MPa, 50 bar, 725 psi

ANSI CL 600 : 10 MPa, 100 bar, 1450 psi

ANSI CL 900 : 16 MPa, 160 bar, 2320 psi

DIN PN 16 : 1.6 MPa, 16 bar, 230 psi

DIN PN 40 : 4 MPa, 40 bar, 580 psi

DIN PN 64 : 6.4 MPa, 64 bar, 930 psi

DIN PN100 : 10 MPa, 100 bar, 1450 psi

DIN PN160 : 16 MPa, 160 bar, 2320 psi

Vacuum Service

Full vacuum subject to fill fluid limits. Refer to table A.

Minimum pressure with tantalum diaphragm is 1kPa abs, 10mbar abs, 0.15psia.

Process Temperature Limits

Same as fill fluid limits. Refer to table A.

260°C (500°F) for Tantalum diaphragm.

204°C (400°F) for use with Teflon anti-stick coating.

Gasket seat finish

smooth (RF or DIN): 0.8µm (32AARH)

serrated (RF): 3.2 to 6.3µm (125 to 250AARH)

Form C (DIN 2526): 160RZ

Form E (DIN 2526): 16RZ

Temperature effect

The following table shows the temperature effect for 20K (36°F) change, detailed separately for

a) the seal (one element)

b) the capillary per meter

c) the system (transmitter sensor when combined with a seal of specific size/type)

referred to silicone oil (DC 200) filling and AISI 316 L ss diaphragm materials.

For filling different from silicone oil (DC200) the errors can be multiplied by the thermal expansion coefficient listed in the fill fluid characteristics table.

THE ERRORS IN TABLE CAN BE CONSIDERED DIVIDED BY 4 FOR TRANSMITTERS USING SAME REMOTE SEAL ON THE TWO SIDES

Flanged Extended Diaphragm Remote Seal

Flanged Extended Diaphragm Seal Size	Seal error	1m Capillary Error	System (Sensor) Error
2in / DN 50	0.3kPa, 3mbar, 1.2inH_2O	0.1kPa, 1mbar, 0.4inH_2O	0.3kPa, 3mbar, 1.2nH_2O
3in / DN 80	0.15kPa, 1.5mbar, 0.6inH_2O	0.08kPa, 0.8mbar, 0.32inH_2O	0.07kPa, 0.7mbar, 0.28inH_2O
4in / DN 100	0.09kPa, 0.9mbar, 0.36inH_2O	0.03kPa, 0.3mbar, 0.12inH_2O	0.03kPa, 0.3mbar, 0.12inH_2O

Flanged Flush Diaphragm Remote Seal

Flanged Flush Diaphragm Seal Size	Seal error	1m Capillary Error	System (Sensor) Error
2in / DN 50	0.29kPa, 2.9mbar, 1.16inH_2O	0.07kPa, 0.7mbar, 0.28inH_2O	0.2kPa, 2mbar, 0.8inH_2O
3in / DN 80	0.09kPa, 0.9mbar, 0.36inH_2O	0.03kPa, 0.3mbar, 0.12inH_2O	0.03kPa, 0.3mbar, 0.12inH_2O
4in / DN 100	0.09kPa, 0.9mbar, 0.36inH_2O	0.03kPa, 0.3mbar, 0.12inH_2O	0.03kPa, 0.3mbar, 0.12inH_2O

BASIC ORDERING INFORMATION model S264F Flanged Remote Seal (flush and extended)

Select one character or set of characters from each category and specify complete catalog number.

BASE MODEL – 1st to 5th characters						**S**	**2**	**6**	**4**	**F**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
Flanged Remote seal (flush and extended)																		
Transmitter side of connection – 6th character																		
High side											H							
Low side											L							
Mounting flange – 7th character																		
Rotating												R						
Size – 8th character																		
2in	ANSI CL 150												A					
2in	ANSI CL 300												D					
2in	ANSI CL 600												G					
2in	ANSI CL 900												J					
3in	ANSI CL 150												B					
3in food design	ANSI CL 150												1					
3in	ANSI CL 300												E					
3in	ANSI CL 600												H					
3in	ANSI CL 900												K					
4in	ANSI CL 150												C					
4in	ANSI CL 300												F					
DN50	DIN PN 16/40												M					
DN50	DIN PN 64												P					
DN50	DIN PN 100												R					
DN50	DIN PN 160												W					
DN80	DIN PN 16												N					
DN80	DIN PN 40												L					
DN80	DIN PN 64												Q					
DN80	DIN PN 100												S					
DN80	DIN PN 160												Y					
DN100	DIN PN 16												T					
DN100	DIN PN 40												U					
Mounting flange/Seat form (seal) – 9th character																		
Carbon steel	Form RF (raised face) – serrated finish			(Notes 1, 3)										A				
Carbon steel	Form RF (raised face) – smooth finish			(Notes 1, 3)										B				
Carbon steel	DIN 2526 – Form C/E – serrated finish			(Notes 2, 3)										G				
Carbon steel	DIN 2526 – Form C/E – smooth finish			(Notes 2, 3)										P				
AISI 316 ss	Form RF (raised face) – serrated finish			(Notes 1, 3)										D				
AISI 316 ss	Form RF (raised face) – smooth finish			(Note 1)										E				
AISI 316 ss	DIN 2526 – Form C/E – serrated finish			(Notes 2, 3)										L				
AISI 316 ss	DIN 2526 – Form C/E – smooth finish			(Notes 2, 3)										Q				
Extensions length and material – 10th character																		
Flush (see next for diaphragm material)															F			
50mm (2in)		AISI 316 L ss		(Notes 3, 4)											1			
50mm (2in)		Hastelloy 276™		(Notes 3, 4, 6)											2			
100mm (4in)		AISI 316 L ss		(Notes 3, 4)											3			
100mm (4in)		Hastelloy 276™		(Notes 3, 4, 6)											4			
150mm (6in)		AISI 316 L ss		(Notes 3, 4)											5			
150mm (6in)		Hastelloy 276™		(Notes 3, 4, 6)											6			
Diaphragm material (seal) – 11th character																		
AISI 316 L ss				(Note 5)									NACE			S		
Hastelloy C276™				(Note 6)									NACE			H		
Tantalum				(Notes 6, 7)												T		
AISI 316 L ss with anti–stick coating				(Notes 5, 6, 8)									NACE			K		
Hastelloy C276™with anti–stick coating				(Notes 6, 8)									NACE			Y		
AISI 316 L ss with anti-corrosion and anti-stick coating				(Notes 5, 6)									NACE			W		
Capillary protection – 12th character																		
AISI 316 ss armour		(RECOMMENDED FOR HIGH TEMPERATURE)																A
AISI 316 ss armour with PVC protective cover																		B

BASIC ORDERING INFORMATION S264F		X	X	X
Capillary length m (feet) – 13th character				
1 (3)		A		
1.5 (5)		B		
2 (7)		C		
2.5 (8)		D		
3 (10)		E		
3.5 (12)		F		
4 (13)		G		
4.5 (15)		H		
5 (17)		J		
5.5 (18)		K		
6 (20)		L		
6.5 (22)		M		
7 (23.5)		N		
7.5 (25)		P		
8 (27)		Q		
9 (30)		R		
10 (33)		S		
12 (40)		T		
14 (47)		U		
16 (53)		V		
Fill fluid – 14th character				
Silicone oil			S	
Inert fluid - Galden	(Notes 3, 9)		N	
Inert fluid - Halocarbon	(Notes 3, 9)		D	
ABB fill	(Note 3)		K	
Sllicone oil for high temperature	(Note 3)		H	
Silicone polymer for low temperature	(Note 3)		C	
Mineral oil (FDA approved)	(Note 10)		W	
Vegetable oil (FDA approved)	(Note 10)		A	
Glycerin-water (FDA approved)	(Note 10)		B	
Certification – 15th character				
None				1
Zone "0" protection	(Note 11)			2

Note 1: Not available with DIN mounting flange code M, P, R, W, N, L, Q, S, Y, T, U

Note 2: Not available with ANSI mounting flange code A, D, G, J, B, E, H, K, C, F

Note 3: Not available with 3in ANSI CL150 food design size code 1

Note 4: Not available with ANSI CL 600 and ANSI CL 900 mounting flange rating code G, J, H, K and with DIN PN64, PN100, and PN160 mounting flange code P, R, W, Q, S, Y

Note 5: Not available with Hastelloy C276 extension code 2, 4, 6

Note 6: Not available with serrated seat finish code A, G, D, L

Note 7: Not available with extension code 1, 2, 3, 4, 5, 6

Note 8: Not available with 2in, DN50, DN80, DN100 mounting flange code A, D, G, J, M, P, R, W, N, L, Q, S, Y, T, U

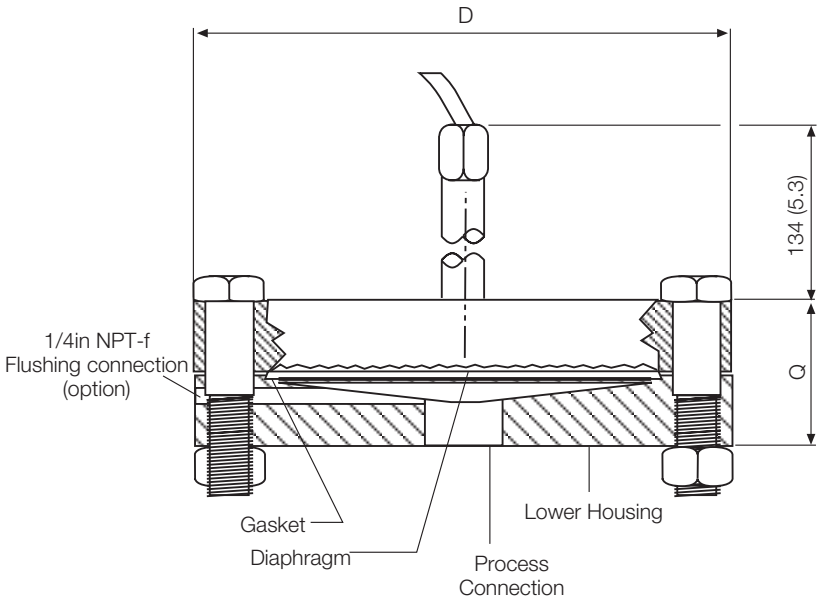
Note 9: Suitable for oxygen service

Note 10: Suitable for food application

Note 11: Not available with Diaphragm material code K, Y

S264T Model Off-line Threaded Connection Remote Seal

The off-line threaded connection remote seals are designed to connect directly to a process pipe via the NPT connection in the lower housing . These elements are available with a flushing connection in the lower housing.



Size	Dimensions mm (in)	
	D (dia)	Q
1/4in NPT	109.2 (4.3)	53.3 (2.1)
1/2in NPT	109.2 (4.3)	53.3 (2.1)
1in NPT	109.2 (4.3)	63.5 (2.5)
1 1/2in NPT	109.2 (4.3)	63.5 (2.5)

Maximum Working Pressure (20 to 120°C; 68 to 248°F)

16 MPa, 160 bar, 2320 psi @ 38°C (100°F).

Vacuum Service

Full vacuum subject to fill fluid limits. Refer to table A.

Minimum pressure with tantalum diaphragm is 1kPa abs, 10mbar abs, 0.15psia.

Process Temperature Limits

Same as fill fluid limits but not greater than 200°C (392°F) due to gasket material. Refer to table A.

-20°C (-4°F) minimum with Viton gasket

Temperature effect

The following table shows the temperature effect for 20K (36°F) change, detailed separately for

a) the seal (one element)

b) the capillary per meter

c) the system (transmitter sensor when combined with a seal of specific size/type)

referred to silicone oil (DC 200) filling and AISI 316 L ss diaphragm materials.

For filling different from silicone oil (DC200) the errors can be multiplied by the thermal expansion coefficient listed in the fill fluid characteristics table.

THE ERRORS IN TABLE CAN BE CONSIDERED DIVIDED BY 4 FOR TRANSMITTERS USING SAME REMOTE SEAL ON THE TWO SIDES

Off-Line Threaded Seal Size	Seal error	1m Capillary Error	System (Sensor) Error
2 1/2in	0.32kPa, 3.2mbar, 1.28inH_2O	0.18kPa, 1.8mbar, 0.72inH_2O	0.15kPa, 1.5mbar, 0.6inH_2O

BASIC ORDERING INFORMATION model S264T Off-Line Threaded Connection Remote Seal

Select one character or set of characters from each category and specify complete catalog number.

BASE MODEL – 1st to 5th characters	**S**	**2**	**6**	**4**	**T**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**				
Off-line threaded remote seal																				
Transmitter side of connection – 6th character																				
High side						H														
Low side						L														
Size – 7th character																				
1/4in NPT-f							1													
1/2in NPT-f							2													
1in NPT-f							3													
1 1/2in NPT-f							4													
Bolts – 8th character																				
AISI 316 L ss								1												
Carbon steel								2												
Alloy steel								3												
Flange material – 9th character																				
AISI 316 ss									1											
Hastelloy C276™									2											
Diaphragm material – 10th character																				
AISI 316 L ss										S										
Hastelloy C276™										H										
Tantalum										T										
Capillary protection – 11th character																				
AISI 316 ss armour (RECOMMENDED FOR HIGH TEMPERATURE)											A									
AISI 316 ss armour with PVC protective cover											B									
Capillary length m (feet) – 12th character																				
1 (3)												A								
1.5 (5)												B								
2 (7)												C								
2.5 (8)												D								
3 (10)												E								
3.5 (12)												F								
4 (13)												G								
4.5 (15)												H								
5 (17)												J								
5.5 (18)												K								
6 (20)												L								
6.5 (22)												M								
7 (23.5)												N								
7.5 (25)												P								
8 (27)												Q								
9 (30)												R								
Fill fluid – 13th character																				
Silicone oil													S							
Inert fluid - Galden (Note 1)													N							
Inert fluid - Halocarbon (Note 1)													D							
ABB fill													K							
Sllicone oil for high temperature													H							
Silicone polymer for low temperature													C							
Mineral oil (FDA approved) (Note 2)													W							
Vegetable oil (FDA approved) (Note 2)													A							
Glycerin-water (FDA approved) (Note 2)													B							
Flushing connections – 14th character																				
Not required														1						
Provided (Note 3)														Q						
Gasket – 15th character																				
PTFE															2					
Viton ™															3					

Note 1: Suitable for oxygen service

Note 2: Suitable for food application

Note 3: Not available with Size code 4

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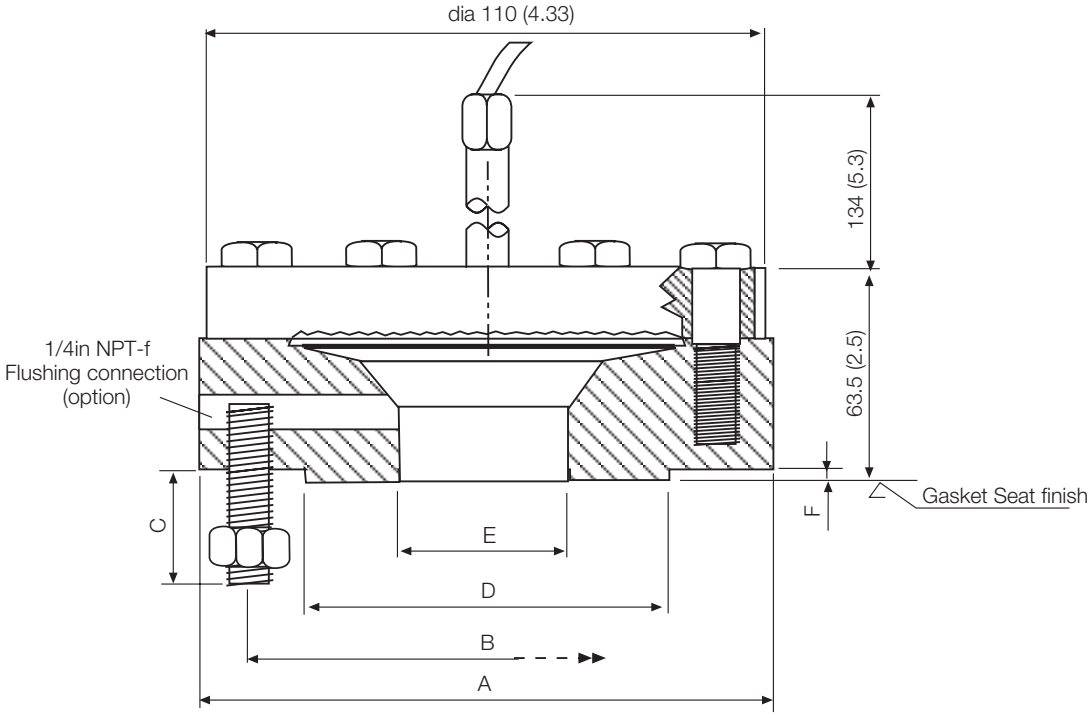
™ Viton is a Dupont de Nemour trademark

™ Galden is a Montefluos trademark

™ Halocarbon is a Halocarbon Products Co. trademark

S264M Model Off-line Flanged Connection Remote Seal

The off-line threaded connection remote seals are designed to connect directly to ANSI or DIN flanged tank nozzles.
These elements are available with a flushing connection in the lower housing, selectable on request in the ordering code.



Connection Size	Rating	Dimensions mm (in)						
		A (dia)	B (dia)	C (4 studs)		D (dia)	E (dia)	F
				Length	Thread			
1in	ANSI CL 150	110 (4.33)	79.4 (3.12)	39 (1.53)	1/2in – 13 UNC	50.8 (2)	26.7 (1.05)	1.6 (0.06)
	ANSI CL 300	124 (4.88)	88.9 (3.5)	51 (2)	5/8in – 11 UNC			
1 ½in	ANSI CL 150	127 (5)	98.4 (3.87)	39 (1.53)	1/2in – 13 UNC	73 (2.87)	41 (1.61)	1.6 (0.06)
	ANSI CL 300	155 (6.1)	114.3 (4.5)	57 (2.24)	3/4in – 10 UNC			
DN 25	DIN PN 16-40	115 (4.52)	85 (3.34)	42 (1.65)	M12	68 (2.67)	28.5 (1.12)	2 (0.07)
DN 40	DIN PN 16-40	150 (5.9)	110 (4.33)	48 (1.89)	M16	88 (3.46)	43.1 (1.69)	3 (0.12)

Maximum Working Pressure (20 to 120°C; 68 to 248°F)

ANSI CL 150 : 2 MPa, 20 bar, 290 psi

ANSI CL 300 : 5 MPa, 50 bar, 725 psi

DIN PN 16-40 : 4 MPa, 40 bar, 580 psi

Vacuum Service

Full vacuum subject to fill fluid limits. Refer to table A.

Minimum pressure with tantalum diaphragm is 1kPa abs, 10mbar abs, 0.15psia.

Process Temperature Limits

Same as fill fluid limits but not greater than 200°C (392°F) due to gasket material. Refer to table A.

-20°C (-4°F) minimum with Viton gasket

Gasket seat finish

serrated (RF): 3.2 to 6.3µm (125 to 250AARH)

Form C (DIN 2526): 160RZ

Temperature effect

The following table shows the temperature effect for 20K (36°F) change, detailed separately for

a) the seal (one element)

b) the capillary per meter

c) the system (transmitter sensor when combined with a seal of specific size/type)

referred to silicone oil (DC 200) filling and AISI 316 L ss diaphragm materials.

For filling different from silicone oil (DC200) the errors can be multiplied by the thermal expansion coefficient listed in the fill fluid characteristics table.

THE ERRORS IN TABLE CAN BE CONSIDERED DIVIDED BY 4 FOR TRANSMITTERS USING SAME REMOTE SEAL ON THE TWO SIDES.

Off-Line Flanged Seal Size	Seal error	1m Capillary Error	System (Sensor) Error
2 ½in	0.32kPa, 3.2mbar, 1.28inH_2O	0.18kPa, 1.8mbar, 0.72inH_2O	0.15kPa, 1.5mbar, 0.6inH_2O

BASIC ORDERING INFORMATION model S264M Off-line Flanged Connection Remote Seal

Select one character or set of characters from each category and specify complete catalog number.

			Code
BASE MODEL – 1st to 5th characters			S 2 6 4 M X X X X X X X X X X
Off-line mini-flanged remote seal			S264M
Transmitter side of connection – 6th character			
High side			H
Low side			L
Mounting flange– 7th character			
Integral with seal			P
Size/Mounting flange rating – 8th character			
1in	ANSI CL 150		A
1in	ANSI CL 300		C
1 1/2in	ANSI CL 150		B
1 1/2in	ANSI CL 300		D
DN25	DIN PN 16/40		M
DN40	DIN PN 16/40		N
Mounting flange/Seat form (seal) – 9th character			
AISI 316 ss	Form RF (raised face) – serrated finish	(Note 1)	D
AISI 316 ss	DIN 2526 – Form C – serrated finish	(Note 2)	L
Hastelloy C276™	Form RF (raised face) – serrated finish	(Note 1)	U
Hastelloy C276™	DIN 2526 – Form C – serrated finish	(Note 2)	V
Diaphragm material (seal) – 10th character			
AISI 316 L ss			S
Hastelloy C276™			H
Tantalum			T
Capillary protection – 11th character			
AISI 316 ss armour	(RECOMMENDED FOR HIGH TEMPERATURE)		A
AISI 316 ss armour with PVC protective cover			B
Capillary length m (feet) – 12th character			
1 (3)			A
1.5 (5)			B
2 (7)			C
2.5 (8)			D
3 (10)			E
3.5 (12)			F
4 (13)			G
4.5 (15)			H
5 (17)			J
5.5 (18)			K
6 (20)			L
6.5 (22)			M
7 (23.5)			N
7.5 (25)			P
8 (27)			Q
9 (30)			R
Fill fluid – 13th character			
Silicone oil			S
Inert fluid - Galden	(Note 3)		N
Inert fluid - Halocarbon	(Note 3)		D
ABB fill			K
SIlicone oil for high temperature			H
Silicone polymer for low temperature			C
Mineral oil (FDA approved)	(Note 4)		W
Vegetable oil (FDA approved)	(Note 4)		A
Glycerin-water (FDA approved)	(Note 4)		B
Flushing connections – 14th character			
Not required			1
Provided			Q
Gasket – 15th character			
PTFE			2
Viton ™			3

Note 1: Not available with DIN mounting flange code M, N

Note 2: Not available with ANSI mounting flange code A, B, C, D

Note 3: Suitable for oxygen service

Note 4: Suitable for food application

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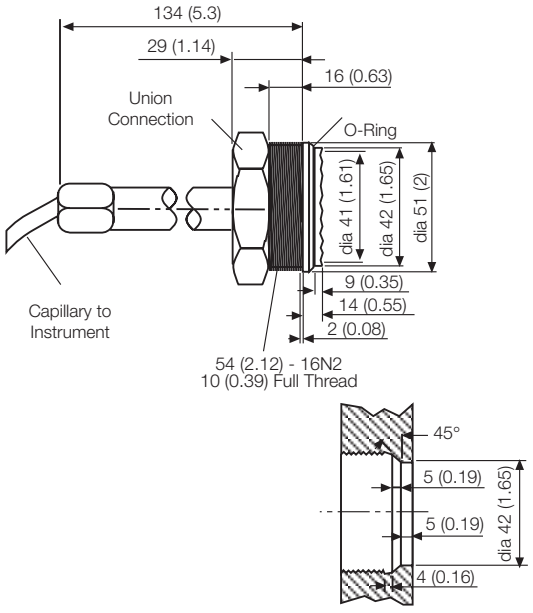
™ Viton is a Dupont de Nemour trademark

™ Galden is a Montefluos trademark

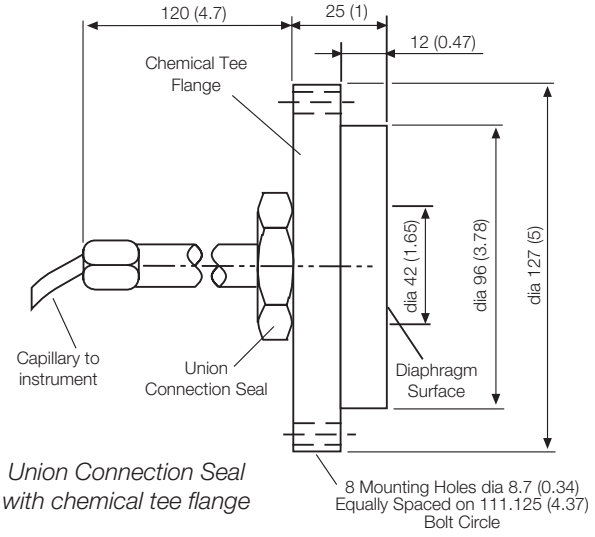
™ Halocarbon is a Halocarbon Products Co. trademark

S264U Model Union Connection Remote Seal (To be used only for gauge pressure)

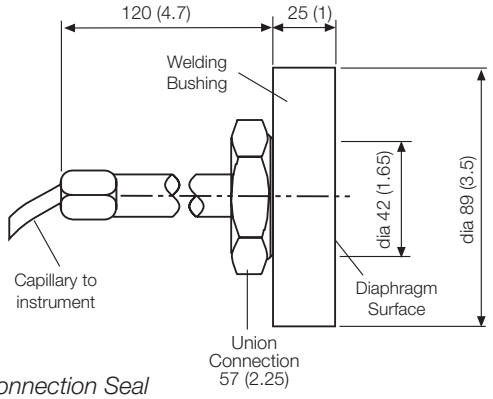
The union connection remote seal are used exclusively for pressure measurement with gauge pressure transmitter.
The seal is available with an optional weld bushing, or with an optional chemical tee flange.The remote seal with a weld bushing, includes a bushing which provides the mating surface for the seal element. The union connection seal with a chemical tee flange, is designed to connect to any process fitting which accepts a chemical tee seal element (refer to Chemical Tee Seal for more information). The union seal connects to the chemical tee flange which serves as an adaptor to permit connection of the union seal to a chemical tee type fitting.



Union Connection Seal without weld bushing



Union Connection Seal with chemical tee flange



Union Connection Seal with weld bushing

Maximum Working Pressure

Union Connection: 10.3 MPa, 103 bar, 1500 psi

With Chemical Tee Flange : 2 MPa, 20 bar, 300 psi

Vacuum Service

Full vacuum subject to fill fluid limits.

Refer to table A.

Process Temperature Limits

Same as fill fluid limits.

Refer to table A.

204°C (400°F) with silicone rubber O-ring

260°C (500°F) with Teflon TFE O-ring

Temperature effect

The following table shows the temperature effect for 20K (36°F) change, detailed separately for

a) the seal (one element)

b) the capillary per meter

c) the system (transmitter sensor when combined with a seal of specific size/type)

referred to silicone oil (DC 200) filling and AISI 316 L ss diaphragm materials.

For filling different from silicone oil (DC200) the errors can be multiplied by the thermal expansion coefficient listed in the fill fluid characteristics table.

Union Connection Seal Size	Seal error	1m Capillary Error	System (Sensor) Error
1 ½in	0.87kPa, 8.7mbar, 3.5inH_2O	0.3kPa, 3mbar, 1.2inH_2O	0.9kPa, 9mbar, 3.6inH_2O

BASIC ORDERING INFORMATION model S264U Union Connection Remote Seal

Select one character or set of characters from each category and specify complete catalog number.

BASE MODEL – 1st to 5th characters		**S**	**2**	**6**	**4**	**U**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
Union connection remote seal (MUST BE ONE ONLY FOR EACH TRANSMITTER)														
Transmitter side of connection – 6th character														
High side							H							
Low side							L							
Size – 7th character														
1 1/2in								L						
Diaphragm material (seal) – 8th character														
AISI 316 L ss				NACE					S					
Hastelloy C 276™									H					
Capillary protection – 9th character														
AISI 316 ss armour	(RECOMMENDED FOR HIGH TEMPERATURE)									A				
AISI 316 ss armour with PVC protective cover										B				
Capillary length m (feet) – 10th character														
1 (3)											A			
1.5 (5)											B			
2 (7)											C			
2.5 (8)											D			
3 (10)											E			
Fill fluid – 11th character														
Silicone oil												S		
Inert fluid - Galden	(Note 1)											N		
Inert fluid - Halocarbon	(Note 1)											D		
ABB fill												K		
Sllicone oil for high temperature												H		
Silicone polymer for low temperature												C		
Mineral oil (FDA approved)	(Note 2)											W		
Vegetable oil (FDA approved)	(Note 2)											A		
Glycerin-water (FDA approved)	(Note 2)											B		
Options – 12th character														
None													1	
AISI 316 ss weld bushing													3	
Chemical tee flange													4	
Gasket – 13th character														
Silicone rubber														5
Teflon TFE														8

Note 1: Suitable for oxygen service

Note 2: Suitable for food application

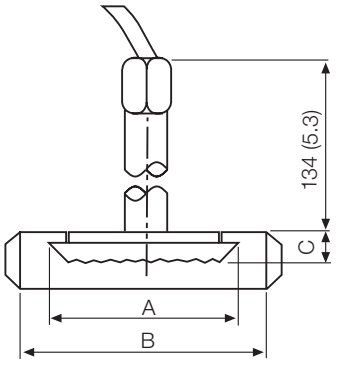
™ Hastelloy is a Cabot Corporation trademark

™ Galden is a Montefluos trademark

™ Halocarbon is a Halocarbon Products Co. trademark

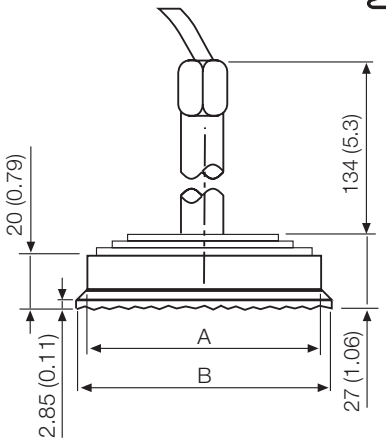
S264S Food and Sanitary Remote Seals

The Union Nut and Triclamp remote seals are designed for connection by Union Nut according to DIN 11851 - F50 or F80 and 2 in, 3 in, 4 in Triclamp sanitary fittings. A variety of gaskets and clamp rings for the seals are available.



Union Nut Seal (to DIN 11851)

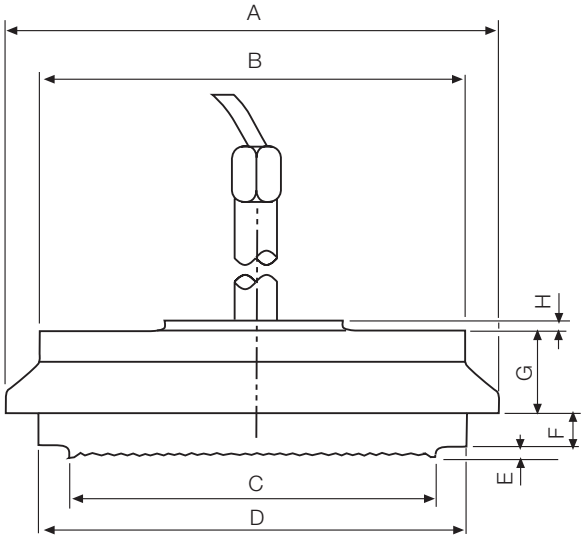
	Union Nut	
	F50	**F80**
A (dia)	68 (2.68)	100 (3.93)
B (RD)	78 (3.07)	110 (4.33)
C	16 (0.63)	19 (0.74)



Triclamp Seal

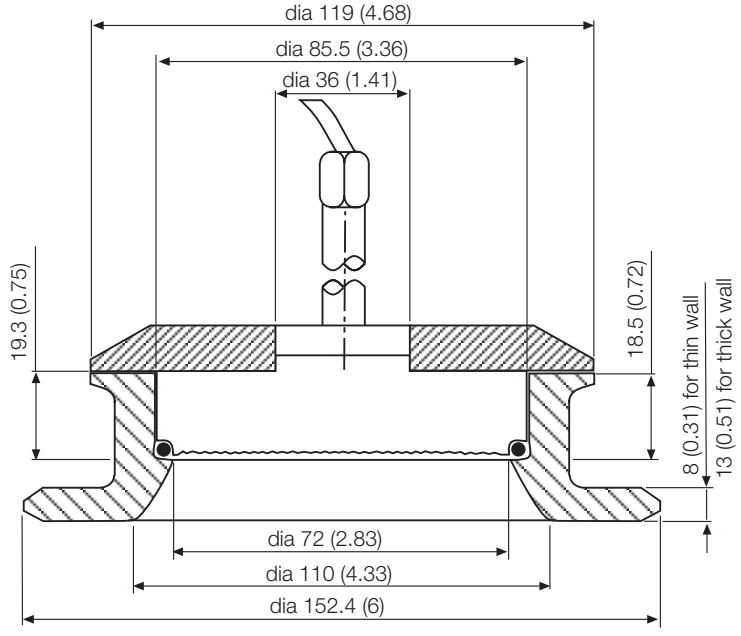
	Triclamp		
	2in	**3in**	**4in**
A (dia)	56.3 (2.2)	83 (3.26)	110.3 (4.34)
B (dia)	64 (2.5)	91 (3.58)	119 (4.68

The Cherry Burrell remote seals are designed for connection to 2in, 3in or 4in Cherry Burrell I-Line sanitary fittings. A 4in V-band clamp is optionally available for the 4in variant.

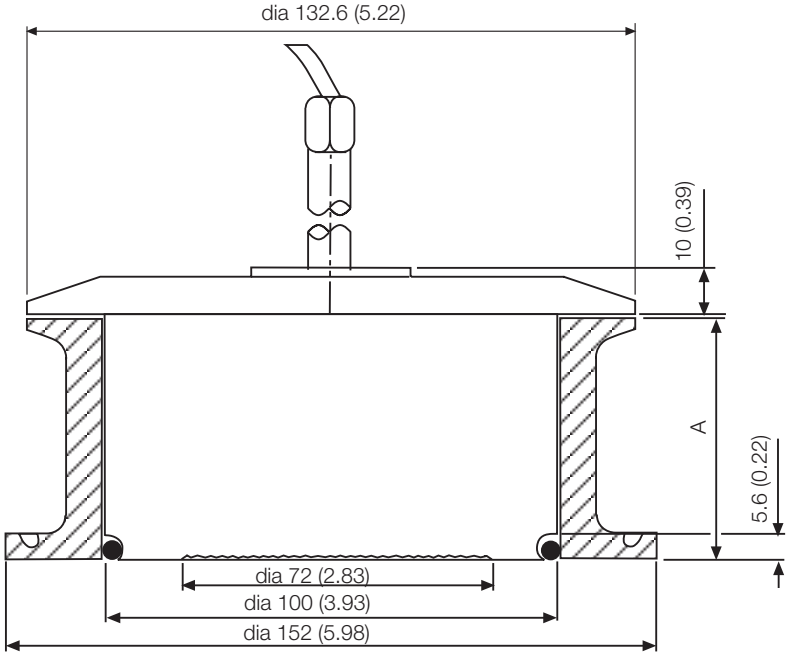


Size	DIMENSIONS mm (in)							
	A (dia)	**B (dia)**	**C (dia)**	**D (dia)**	**E**	**F**	**G**	**H**
2in	67 (2.64)	56 (2.2)	42 (1.65)	57(2.24)	3.2 (0.13)	6.5 (0.26)	12.5 (0.49)	3 (0.12)
3in	89 (3.86)	81 (3.19)	72.42 (2.85)	83.8 (3.3)	2.4 (0.09)	7.9 (0.31)	15 (0.59)	3 (0.12)
4in	124 (4.88)	111.25 (4.38)	72.42 (2.85)	109.3 (4.3)	2.4 (0.09	7.9 (0.31)	15 (0.59)	3 (0.12)

The sanitary remote seal with flush diaphragm is designed to connect to a 4in sanitary tank spud. The tank spud and process gasket are available as options with the seal suitable V-band clamp is also available on request.
NOTE: The tank spud required for connection of this seal element must be welded to the process vessel prior to connecting the seal, following arecommended welding and pressure testing procedure.

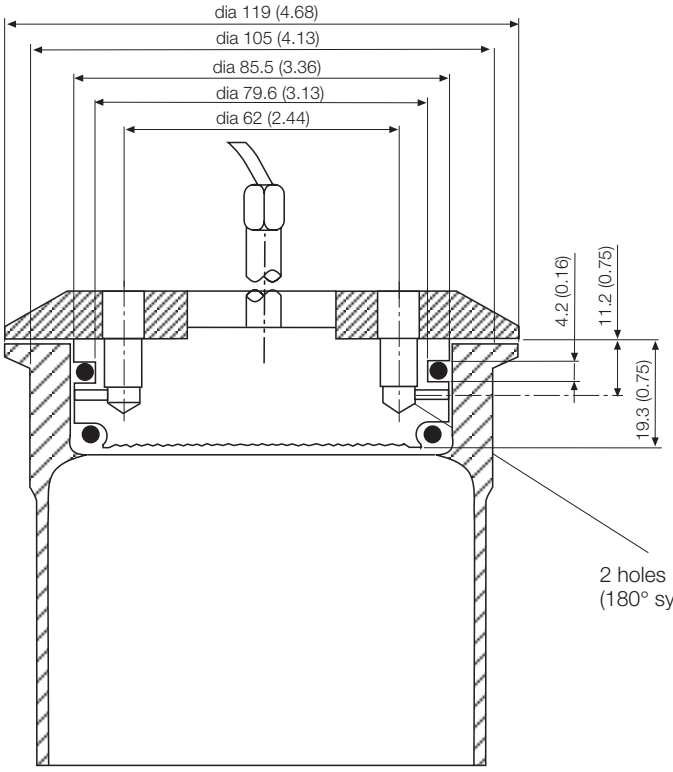


The sanitary remote seal with extended diaphragm is designed to connect to a 4in sanitary tank spud. The tank spud and process gasket are available with the seal.
NOTE: The tank spud required for connection of this seal element must be welded to the process vessel prior to connecting the seal. Refer to Installing Sanitary Tank Spuds for the spud mounting dimensions and a recommended welding and pressure testing procedure in the S264 instruction manual.

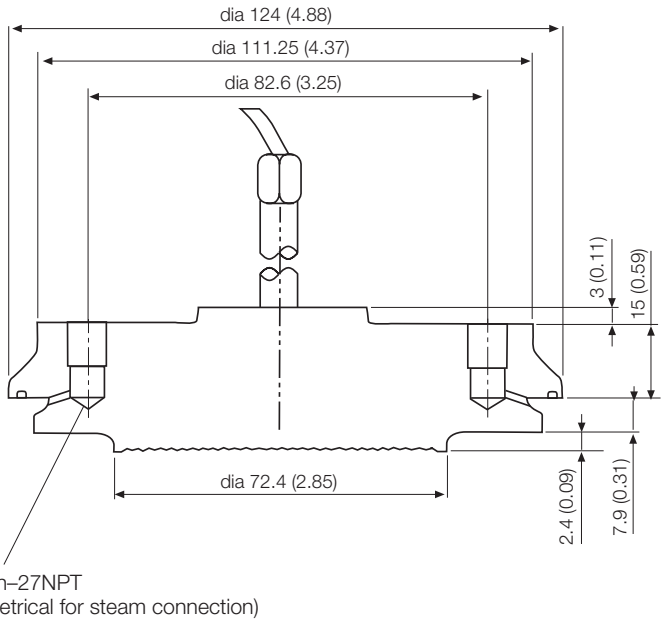


Size	Dimensions mm (in) A
2in	53.3 (2.1)
4in	104.1 (4.1)
6in	154.9 (6.1)

The sanitary aseptic remote seal is designed to connect to a 4in sanitary fitting: either an aseptic tank spud or a 4in Cherry Burrell aseptic ferrule. The tank spud, gaskets and V-band clamp are available option with the seal element.
NOTE: The tank spud or ferrule required for connection of this seal element must be welded to the process vessel prior to connecting the element, following recommended welding and pressure testing procedure. Weld the Cherry Burrell ferrule to the process vessel in accordance with manufacturers recommandations.



4in Aseptic Flanged Connection



4in Cherry Burrell Aseptic

Maximum Working Pressure @ 20°C (68°F)

2 in Triclamp : 3.8 MPa, 38 bar, 550 psi

3 in Triclamp : 2.4 MPa, 24 bar, 350 psi

4 in Triclamp : 1.7 MPa, 17 bar, 250 psi

F50/F80 Union nut : 2.5 MPa, 25 bar, 360 psi

Cherry Burrell: 1.9MPa, 19bar, 275psi

4in Sanitary flush or extended or aseptic: 1.9MPa, 19bar, 275psi

4in V-band clamp option: 1MPa, 10bar, 145psi

4in schedule 5 V-band clamp option: 0.7MPa, 7bar, 100psi @ 21°C.

Process Temperature Limits

Same as fill fluid limits. Refer to table A.

Process Gasket Temperature Limits

Buna: –40 to 121°C (–40 to 250°F)

Viton: 2 to 177°C (35 to 350°F)

Ethylene Propylene: 149°C (300°F)

Vacuum Service

Full vacuum subject to fill fluid limits. Refer to table A.

Temperature effect

The following table shows the temperature effect for 20K (36°F) change, detailed separately for

a) the seal (one element)

b) the capillary per meter

c) the system (transmitter sensor when combined with a seal of specific size/type)

referred to silicone oil (DC 200) filling and AISI 316 L ss diaphragm materials.

For filling different from silicone oil (DC200) the errors can be multiplied by the thermal expansion coefficient listed in the fill fluid characteristics table.

THE ERRORS IN TABLE CAN BE CONSIDERED DIVIDED BY 4 FOR TRANSMITTERS USING SAME REMOTE SEAL ON THE TWO SIDES

Union Nut, Triclamp, Cherry Burrell, Sanitary and Aseptic Seal Size	Seal error	1m Capillary Error	System (Sensor) Error
2in / F50	0.7kPa, 7mbar, 2.8inH_2O	0.42kPa, 4.2mbar, 1.7inH_2O	1.4kPa, 14mbar, 5.6inH_2O
3in / F80	0.06kPa, 0.6mbar, 0.24inH_2O	0.03kPa, 0.3mbar, 0.12inH_2O	0.03kPa, 0.3mbar, 0.12inH_2O
4in	0.06kPa, 0.6mbar, 0.24inH_2O	0.03kPa, 0.3mbar, 0.12inH_2O	0.03kPa, 0.3mbar, 0.12inH_2O

BASIC ORDERING INFORMATION model S264S Food and Sanitary Remote Seals

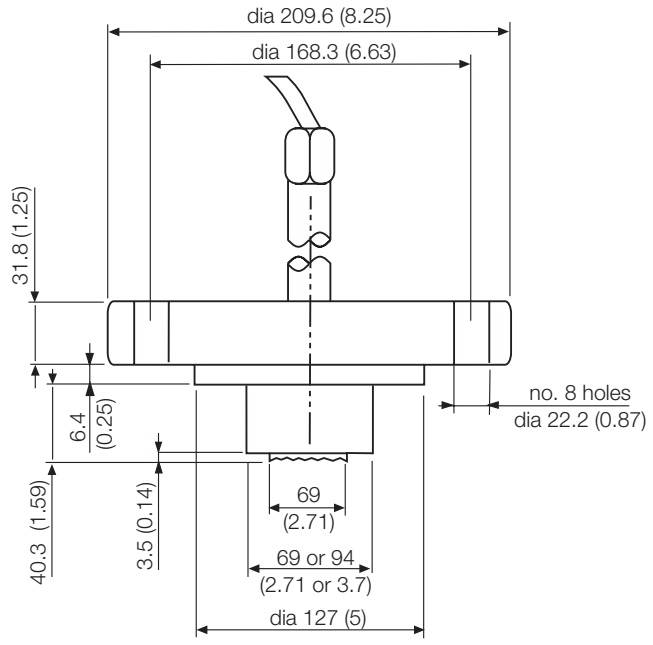
Select one character or set of characters from each category and specify complete catalog number.

BASE MODEL – 1st to 5th characters	**S**	**2**	**6**	**4**	**S**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	
Food and Sanitary remote seals														
Transmitter side of connection – 6th character														
High side						H								
Low side						L								
Mounting connection – 7th character														
Union nut DIN 11851 – F50							A							
Union nut DIN 11851 – F80							B							
2in Triclamp							F							
3in Triclamp							G							
4in Triclamp							H							
2in Cherry Burrell							L							
3in Cherry Burrell							M							
4in Cherry Burrell							N							
4in Sanitary flush diaphragm							P							
4in Sanitary extended (2in) diaphragm							Q							
4in Sanitary extended (4in) diaphragm							R							
4in Sanitary extended (6in) diaphragm							S							
4in Cherry Burrell aseptic							W							
4in aseptic flanged connection							J							
Seal diaphragm material – 8th character														
AISI 316 L ss								S						
Capillary protection – 9th character														
AISI 316 ss armour (RECOMMENDED FOR HIGH TEMPERATURE)									A					
AISI 316 ss armour with PVC protective cover									B					
Capillary length m (feet) – 10th character														
1 (3)										A				
1.5 (5)										B				
2 (7)										C				
2.5 (8)										D				
3 (10)										E				
3.5 (12)										F				
4 (13)										G				
4.5 (15)										H				
5 (17)										J				
5.5 (18)										K				
6 (20)										L				
6.5 (22)										M				
7 (23.5)										N				
7.5 (25)										P				
8 (27)										Q				
9 (30)										R				
10 (33)										S				
Fill fluid – 11th character														
Silicone oil											S			
Mineral oil (FDA approved) (Note 1)											W			
Vegetable oil (FDA approved) (Note 1)											A			
Glycerin-water (FDA approved) (Note 1)											B			
Clamp/Fittings – 12th character														
None												1		
2in V-band Clamp (for 2in Triclamp)												A		
3in V-band Clamp (for 3in Triclamp)												B		
4in V-band Clamp (for 4in Triclamp, 4in Cherry Burrell, 4in Sanitary flush and 4in aseptic flanged)												C		
4in Tank spud, tank wall up to 4.7mm (0.18) (for 4in Sanitary flush seal)												D		
4in Tank spud, tank wall up to 9.5mm (0.37) (for 4in Sanitary flush seal)												E		
4in schedule 5 V-band clamp (for 4in Sanitary extended seal)												F		
Tank spud for 2in extension (for 4in Sanitary extended 2in seal)												G		
Tank spud for 4in extension (for 4in Sanitary extended 4in seal)												H		
Tank spud for 6in extension (for 4in Sanitary extended 6in seal)												J		
Aseptic tank spud (for 4in aseptic flanged seal)												P		
Gasket – 13th character														
None													1	
Ethylene propylene gasket DN100 (for 4in Sanitary extended seal)													A	
Ethylene propylene gasket DN50 (for F50 Union nut seal)													C	
Ethylene propylene gasket DN80 (for F80 Union nut seal)													D	
Viton™ gasket (for 4in sanitary flush and aseptic flanged seal)													3	
Buna gasket (for 4in sanitary flush and aseptic flanged seal)													4	

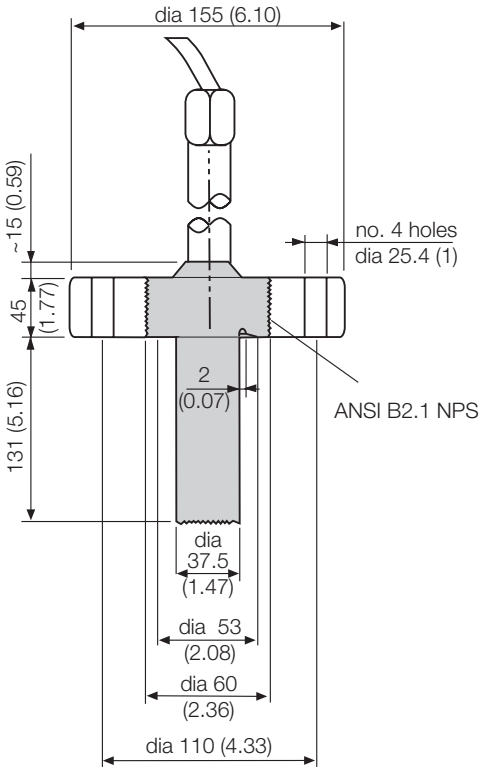
Note 1: Suitable for food application

™ Viton is a Dupont de Nemour trademark

S264P Remote seal(s) for Urea Service



Flange ANSI 600, 3in



Threaded Flange ANSI 2500, 2in

Maximum Working Pressure @ 20°C (68°F)

3in, ANSI 600 flange:

- 8 MPa, 80 bar, 1160 psi

2in ANSI 2500 threaded flange:

- 32 MPa, 320 bar, 4640 psi

Vacuum Service

Full vacuum subject to fill fluid limits. Refer to table A.

Process Temperature Limits

Same as fill fluid limits. Refer to table A.

Temperature effect

The following table shows the temperature effect for 20K (36°F) change, detailed separately for

a) the seal (one element)

b) the capillary per meter

c) the system (transmitter sensor when combined with a seal of specific size/type)

referred to silicone oil (DC 200) filling and AISI 316 L ss diaphragm materials.

For filling different from silicone oil (DC200) the errors can be multiplied by the thermal expansion coefficient listed in the fill fluid characteristics table.

THE ERRORS IN TABLE CAN BE CONSIDERED DIVIDED BY 4 FOR TRANSMITTERS USING SAME REMOTE SEAL ON THE TWO SIDES

Urea Service Flanged Seal Size	Seal error	1m Capillary Error	System (Sensor) Error
1 ½in	1.4kPa, 14mbar, 5.6inH_2O	0.56kPa, 5.6mbar, 2.24inH_2O	1.8kPa, 18mbar, 7.2inH_2O
2 ½in	0.22kPa, 2.2mbar, 0.88inH_2O	0.1kPa, 1mbar, 0.4inH_2O	0.09kPa, 0.9mbar, 0.36inH_2O

BASIC ORDERING INFORMATION model S264P Remote Seal for Urea Service

Select one character or set of characters from each category and specify complete catalog number.

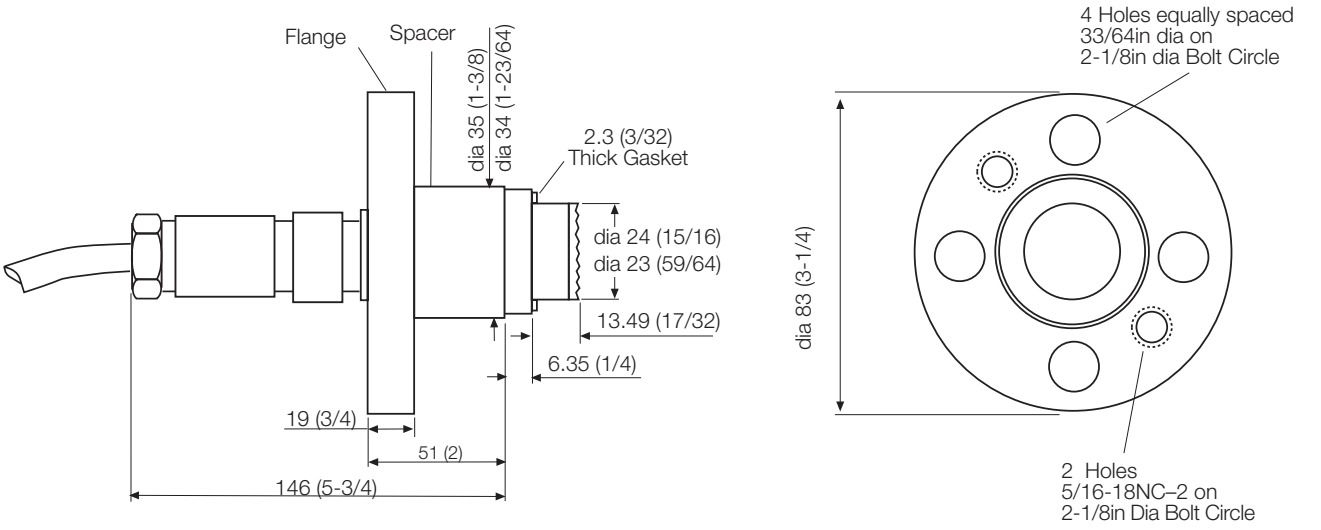
BASE MODEL – 1st to 5th characters				**S**	**2**	**6**	**4**	**P**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
Remote seal for Urea Service																
Transmitter side of connection – 6th character																
High side									H							
Low side									L							
Size / Mounting rating / Material – 7th character																
3in	ANSI 600 RF	AISI 316 L ss Urea Grade								H						
2in	Threaded flange	Carbon steel								J						
Extension length / Diameter – 8th character																
40.3mm (1.59in)	69mm (2.7in		(Note 1)								R					
40.3mm (1.59in)	94mm (3.71in)		(Note 1)								S					
131mm (5.16in)	37.5mm (1.47in)		(Note 2)								T					
Diaphragm material (seal) – 9th character																
AISI 316 L ss Urea Grade												S				
Capillary protection – 10th character																
AISI 316 ss armour		(RECOMMENDED FOR HIGH TEMPERATURE)											A			
AISI 316 ss armour with PVC protective cover													B			
Capillary length m (feet) – 11th character																
1 (3)														A		
1.5 (5)														B		
2 (7)														C		
2.5 (8)														D		
3 (10)														E		
3.5 (12)														F		
4 (13)														G		
4.5 (15)														H		
5 (17)														J		
5.5 (18)														K		
6 (20)														L		
Fill fluid – 12th character																
Silicone oil															S	
Sllicone oil for high temeprature															H	
Option – 13th character																
None																1
Huey test																3

Note 1: Not available with Size/Mounting flange code J

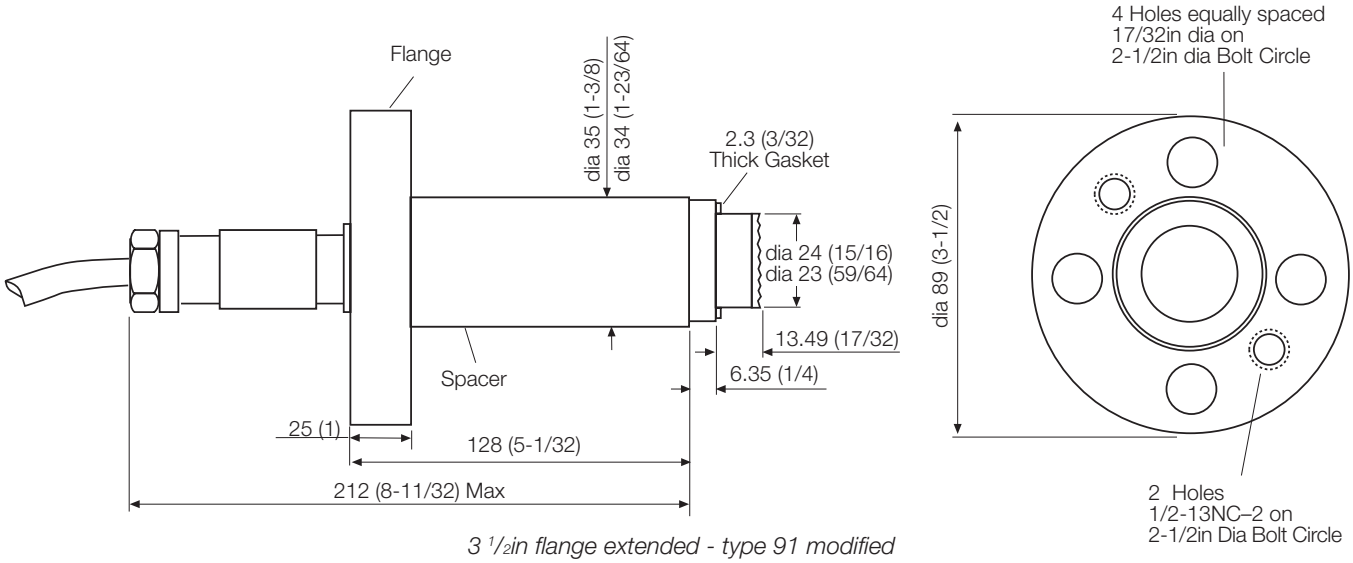
Note 2: Not available with Size/Mounting flange code H

S264B Model Button Type Remote Seal (To be used only for gauge pressure)

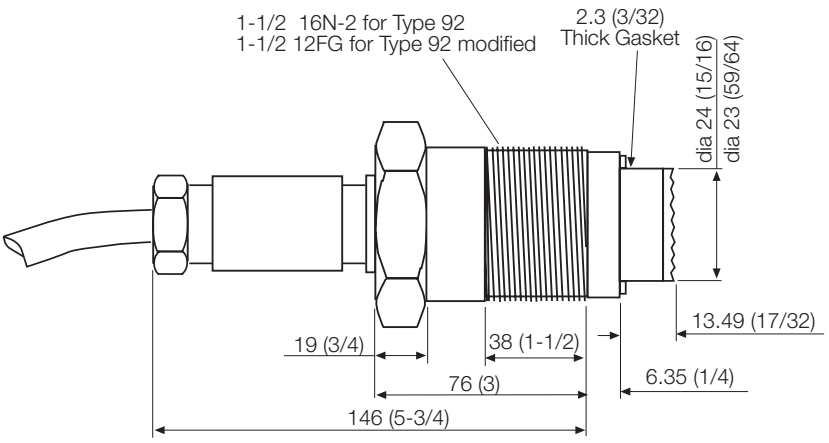
These remote seals are designed to connect directly to a process pipe via the NPT threaded connection or to match pipe fitting with an interface suitable for the provided mating flange. The button seals, due to their design, are dedicated for measurement with medium/ high calibrated span (2 MPa/20 bar/290 psi approx. or greater).



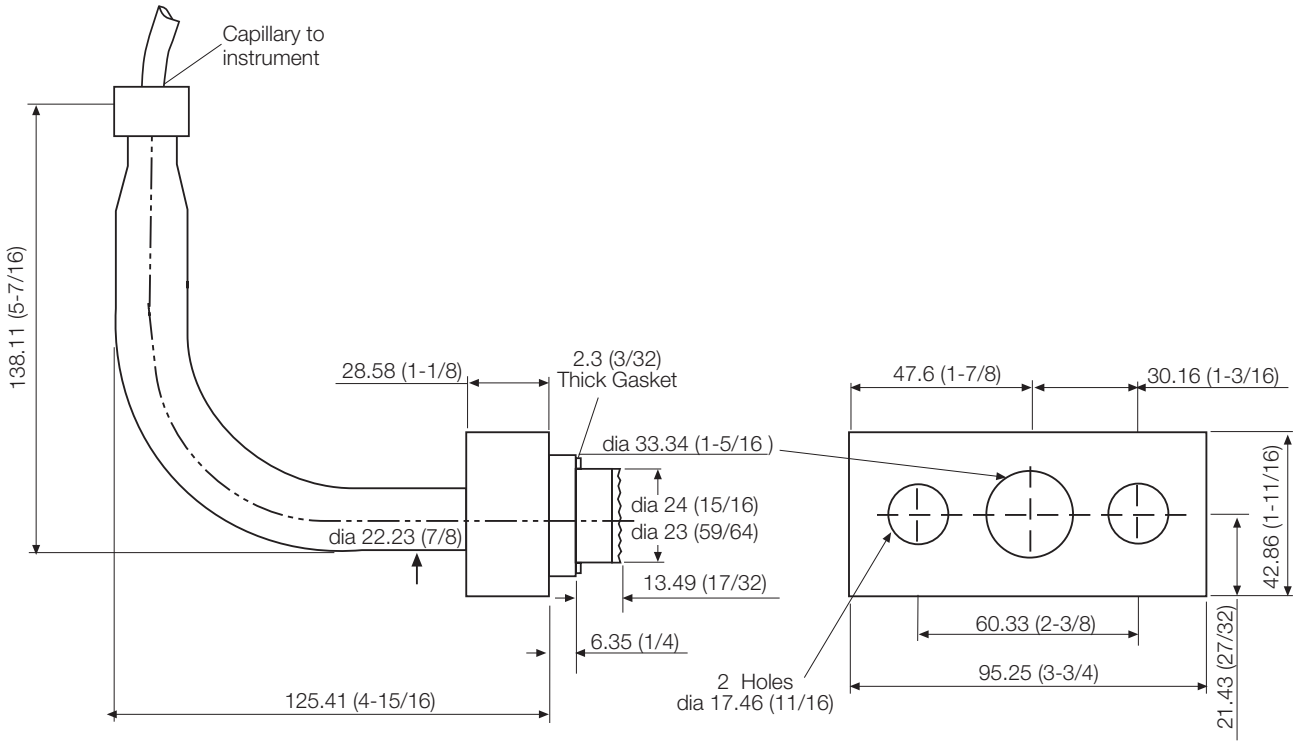
3 1/4in flange extended - type 91



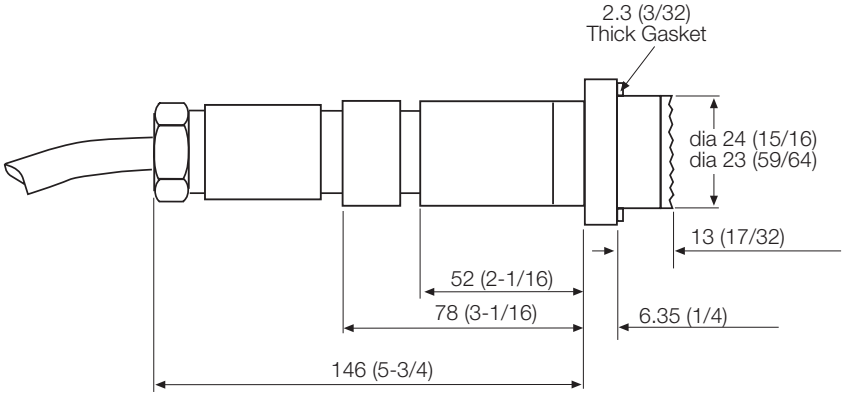
3 1/2in flange extended - type 91 modified



1 1/2in threaded union type 92/92 modified



Bracket – type 89



Universal– type 90

Maximum Working Pressure (20 to 120°C; 68 to 248°F)

Types 89, 90 and 92: 42MPa, 420bar, 6090psi

Types 91: 35Mpa, 350bar, 5075psi

Vacuum Service

Full vacuum subject to fill fluid limits.

Refer to table A.

Process Temperature Limits

Same as fill fluid limits. Refer to table A.

Temperature effect

The following table shows the temperature effect for 20K (36°F) change, detailed separately for

a) the seal (one element)

b) the capillary per meter

c) the system (transmitter sensor when combined with a seal of specific size/type)

referred to silicone oil for high temperature filling and Hastelloy C276 diaphragm materials.

Button Type Seal Size	Seal error	1m Capillary Error	System (Sensor) Error
1in	8kPa, 80mbar, 32inH_2O	1.8kPa, 18mbar, 72inH_2O	3.2kPa, 32mbar, 12.8inH_2O

BASIC ORDERING INFORMATION model S264B Button Type Remote Seal

Select one character or set of characters from each category and specify complete catalog number.

BASE MODEL – 1st to 5th characters		**S**	**2**	**6**	**4**	**B**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**			
Button type remote seal (MUST BE ONE ONLY FOR EACH TRANSMITTER)																		
Transmitter side of connection – 6th character																		
High side							H											
Low side							L											
Size – 7th character																		
1in								M										
Mounting connection type – 8th character																		
3 1/4in flange extended – type 91									A									
3 1/2in flange extended – type 91 modified									B									
1 1/2in 16N-2 threaded union – type 92									C									
1 1/2in 12NF threaded union – type 92 modified									F									
Bracket – type 89									D									
Universal – type 90									E									
Diaphragm material (seal) – 9th character																		
Hastelloy C 276™										H								
Capillary protection – 10th character																		
AISI 316 ss armour	(RECOMMENDED FOR HIGH TEMPERATURE)										A							
AISI 316 ss armour with PVC protective cover											B							
Capillary length m (feet) – 11th character																		
1 (3)												A						
1.5 (5)												B						
2 (7)												C						
2.5 (8)												D						
3 (10)												E						
Fill fluid – 12th character																		
Silicone oil													S					
SIlicone oil for high temperature													H					
Mineral oil (FDA approved)	(Note 1)												W					
Option – 13th character																		
Not required															1			
Jack out collar for seal removal for process (not for type 89)															2			
Gasket – 14th character																		
None																1		
Aluminium																E		
AISI 316 ss																F		

Note 1: Only available with Bracket type 89 version and suitable for food application

™ Hastelloy is a Cabot Corporation trademark

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