

## Diaphragm seals threaded types

### Model 100/101, 200/201, 300/301, 400/401 and 500/501

Threaded connections to ANSI/ASME or ISO

#### Features

- Removable diaphragm seal capsule (model 100/101)
- All metal diaphragms with Teflon gasket
- Interchangeable components
- Removable top and bottom housing
- Variety of wetted parts materials
- Optional ATEX approved CE Ex II 2 GD c

#### Ranges

From 15 psi (1 bar) up to 15.000 psi (1000 bar)

#### Applications

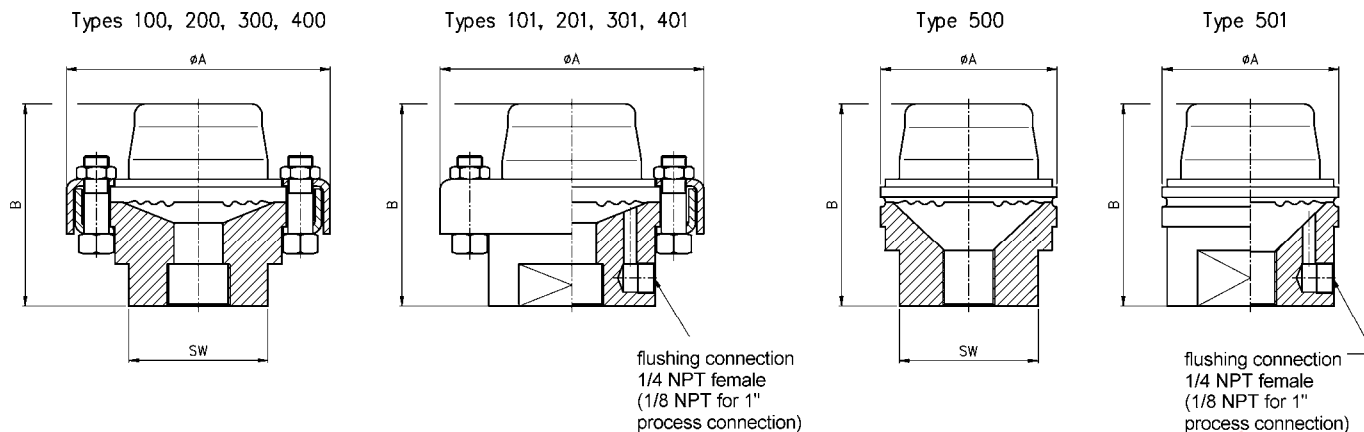
Chemical and petrochemical industry  
Machine and apparatus construction  
Offshore installations  
Pulp and paper industry  
Waste water treatment



Technical specification	100	101	200	201	300	301	400	401	500	501
Process connection size	¼ NPT, ½ NPT, ¾ NPT, 1 NPT, G ¼, G ½, G ¾, G 1 All connection sizes male or female. Others on request						¼ NPT, ½ NPT, ¾ NPT, 1 NPT Only female connection. Others on request			
Construction	Bolted top and bottom housing, removable for easy maintenance						Diaphragm, top and bottom housing welded			
Fill port	At the side with stainless steel ball and set screw									
Flushing connection	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Flushing connection size	¼ NPT female for process connection sizes ¼", ½" and ¾" 1/8 NPT female for process connection size 1"									
Maximum pressure										
Standard in psi/bar	500/35 Viton & Kalrez diaphragm						--		--	
Metal capsule/diaphragm in psi/bar	2500/172		2500/172, (also for Teflon diaphragm)				4400/300		500/35	
With high pressure ring in psi/bar	5000/350	--	5000/350	--	--	--	9000/620		--	
Measuring principle	Screwed capsule		Welded capsule or bonded diaphragm		Clamped diaphragm		Welded diaphragm to top and bottom housing			
Instrument connections [female]										
ANSI/ASME B1.20.1	¼ NPT, ½ NPT, others on request									
ISO 228-1	G ¼, G ½									
Material (wetted parts)										
Bottom housing	Steel, stainless steel 316L (1.4404), stainless steel 304L (1.4306), Monel 400, Hastelloy C, Hastelloy B, Inconel 800, Nickel, Carpenter 20, Titanium, PVC, Kynar						Stainless steel 316L (1.4404), Monel 400, Hastelloy C			
Diaphragm/capsule (metal type)	Stainless steel 316L (1.4404), stainless steel 304L (1.4306), K-Monel, Hastelloy C, Hastelloy B, Nickel, Carpenter 20, Tantalum						Stainless steel 316L (1.4404), K-Monel, Hastelloy B, Hastelloy C, Tantalum, Titanium			
Diaphragm (other types)	Halar coated Monel, Gold plated stainless steel 304L (1.4306)		Kalrez, Teflon, Viton, Titanium		Kalrez, Teflon, Viton					
Material (non wetted parts)										
Top housing	Nickel plated carbon steel, optional stainless steel 316L (1.4404), 316L is standard for ISO connections						Stainless steel 316L (1.4404), Monel for Monel bottom housing Titanium for Titanium bottom housing			
Clamps, rings, bolts and nuts	Steel, painted black, optional stainless steel 300 (bolts and nuts max. 1500 psi/100 bar)									
Accuracy	Additional 0,5 % to the specified tolerance of the mounted instrument									
Conformity according to RL 94/9/EC appendix X for mechanical equipment in potential hazardous areas	Optional, marking  CE Ex II 2 GD c File no. 800319037X at notified body 0032, TÜV NORD CERT The temperature class will be determined by the used measuring device.									
Limits for diaphragm/capsule material										
Temperature	-40/400 °F, -40/204 °C		-40/350 °F, -40/176 °C		30/350 °F, 0/176 °C		Metal depending on filling fluid			
Maximum displacement volume in cm <sup>3</sup>	2,23		8		8		1,14			
Filling liquids (temperature range)	Glycerin (0/400 °F, -18/204 °C), silicone (-40/600 °F, -40/315 °C), halocarbon (-70/300 °F, -56/149 °C), Syltherm 800 (-40/750 °F, -40/400 °C), vegetable oil (32/248 °F, 0/120 °C), Neobee M-20 (0/320 °F, -17/160 °C). Others on request, also depending on selected material and configuration.									
Mounting	Direct or with capillary									
Weight dry in kg	0,8, with high pressure rings 1,1									
Accessories, options	NACE, pressure gauges, pressure switches, capillaries									

All specifications are subject to change without notice.

## General dimensions in mm



A	B	SW
95 mm	73 mm	46 mm

A	B	SW
63 mm	73 mm	46 mm

## Order information

Rev. B

Process connection	Diaphragm capsule material	Bottom housing material	Instrument connection	Rating	Filling fluid	Options
(04) ½ NPT male	(C) 304L (1.4306) <sup>1)</sup>	(B) Steel <sup>1)</sup>	(02T) ¼ NPT female	(PSI) Standard for screwed seals	(CG) Glycerin <sup>1)</sup> (direct mounted, 0/400 °F, -18/204 °C)	(NH) Tagging wired
(10) 1 NPT female	(D) Carpenter 20 <sup>1)</sup>	(CL) 304L (1.4306) <sup>1)</sup>	(04T) ½ NPT female		(CK) Silicone (direct mounted or with capillary ≤ 10' (3 m), -40/600 °F, -40/315 °C)	(6B) Oxygen cleaned (only filled with halocarbon)
(11) G 1 female <sup>1)</sup>	(G) Hastelloy B	(D) Carpenter 20 <sup>1)</sup>	(15T) G ½ <sup>1)</sup> female		(EJ) Silicone (with capillary > 10' (3 m), -40/600 °F, -40/315 °C)	(LD) Locking device
(15) G ½ B male <sup>2)</sup>	(H) Hastelloy C	(G) Hastelloy B <sup>1)</sup>			(CF) Halocarbon (direct mounted or with capillary, -70/300 °F, -56/149 °C)	(HP) High pressure clamp ring (5000 psi, 350 bar for model 100, 9000 psi, 620 bar for model 400)
(25) ¼ NPT female	(K) Kalrez <sup>2) 4)</sup> (temperature limit 30/350 °F, 0/176 °C)	(H) Hastelloy C			(HA) Syltherm 800 (direct mounted or with capillary, -40/750 °F, -40/400 °C)	(SE) Stainless steel clamp rings including stainless steel 300 bolts and nuts (max. 1500 psi, 100 bar)
(26) G ¼ female <sup>1)</sup>	(N) Nickel <sup>1)</sup>	(KY) Kynar <sup>1)</sup> (only ¼ and ½ NPT)			(GZ) Vegetable oil (direct mounted or with capillary, 32/248 °F, 0/120 °C)	(SB) Stainless steel 300 bolts and nuts (max. 1500 psi, 100 bar)
(50) ½ NPT female	(P) K-Monel	(M) Monel 400			(NM) Neobee M-20 (direct mounted or with capillary, 0/320 °F, -17/160 °C)	(PU) Pipe plug for flushing connection (same material as bottom housing)
(75) ¾ NPT female	(PH) Monel Halar coated <sup>3)</sup>	(N) Nickel <sup>1)</sup>				(1115A) Stainless steel armored capillary <sup>1)</sup>
(76) G ¾ female <sup>1)</sup>	(S) 316L (1.4404)	(SL) 316L (1.4404)				(1115P) Stainless steel armored capillary with PVC sleeving <sup>1)</sup>
	(T) Teflon <sup>2)</sup> (temperature limit 40/400 °F, -40/204 °C)	(TI) Titanium <sup>1)</sup> (only NPT female)				(ATEX) ATEX-listed (not for type 400/401 and 500/501)
	(TI) Titanium <sup>5)</sup>	(V) PVC <sup>1) 2)</sup> (only ¼ and ½ NPT)				
	(U) Tantalum	(W) Inconel 800 <sup>1)</sup>				
	(W) 304L (1.4306) Gold plated <sup>3)</sup>					
	(Y) Viton <sup>2) 4)</sup> (temperature limit -40/350 °F, -40/176 °C)					
	<sup>1)</sup> not for type 400/401 and 500/501	<sup>1)</sup> not for type 400/401 and 500/501.	<sup>1)</sup> only for type 100/101 and 300/301		<sup>1)</sup> not for vacuum or compound ranges	<sup>1)</sup> max. length 30 m, specify connections as per connection table and length in [mm] E.G. 04-1115A-04-3000
<sup>2)</sup> type 400/401 and 500/501 with adapter.	<sup>2)</sup> only for type 200/201 and 300/301	<sup>2)</sup> only ¼ and ½ NPT, max. rating/temp. limit: 200 psi/14 bar at 74 °F/23 °C; 125 psi/8,6 bar at 125 °F/52 °C; 80 psi/5,5 bar at 150 °F/65 °C				
<sup>3)</sup> only for type 100/101	<sup>3)</sup> only for type 100/101					
<sup>4)</sup> max. rating 500 psi	<sup>4)</sup> max. rating 500 psi					
<sup>5)</sup> not for type 100/101 and 300/301	<sup>5)</sup> not for type 100/101 and 300/301					
others on request		others on request	others on request		others on request	

## How to order

Process connection	Type	Diaphragm capsule material	Bottom housing material	Instrument connection	Rating	Filling fluid	Option
50	100	H	H	04T	PSI	CF	NH

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