

General Specifications

Diaphragm Seals With DPharp EJA and EJX Series Pressure Transmitters



Our remote or direct mount Diaphragm Seal is commonly used when process-operating conditions extend beyond the normal operating limits of a pressure transmitter. In addition, they are used to reduce the weight of the device at the process connection, particularly with conventional pressure transmitters. The lightweight design of DPharp EJA and EJX pressure transmitters combined with a robust direct-mounting system provide an excellent solution for both close-coupled and remote seal applications.

Diaphragm seals are produced and mounted on Yokogawa Transmitters by WIKA Alexander Wiegand GmbH.

For service where one or more of the following conditions exist:

- High temperature
- Clogging potential
- Frequent cleaning requirements
- Aggressive or abrasive processes
- ANSI or DIN (EN) flanged including flush and extended process connections
- NPT threaded process connections
- Sanitary connections
- Pulp & Paper connections (flush diaphragm seal threaded)



Model Code	Description	Page
W99027A/D	Flange type seals with flush diaphragm, with the full range of wetted parts materials available (Hastelloy B & C, Inconel, Monel, Nickel, Tantalum and Titanium)	8
W99028A/D	Diaphragm Seal cell type with flush diaphragm, with the full range of wetted parts materials available (Hastelloy B & C, Inconel, Monel, Nickel, Tantalum and Titanium)	9
W99029A/D	Diaphragm Seal Flange type with extension, with the full range of wetted parts materials available (Hastelloy B & C, Inconel, Monel, Nickel, Tantalum and Titanium)	10
W99012A/D	Diaphragm Seal with flange process connection. Threaded design to be used when you need to increase the diaphragm size without changing the supplied process connector on either the vessel or pipeline	11
W99026A/D	Diaphragm Seal with flange process connection. Welded design to be used when you need to increase the diaphragm size without changing the supplied process connector on either the vessel or pipeline	11
W99041A/D	Diaphragm Seal with flange process connection. Large volume diaphragm for low pressure applications	12
W99010	Diaphragm Seal with threaded process connection. To be used when you need to increase the diaphragm size without changing the supplied process connector on either the vessel or pipeline	13
W99040	Diaphragm Seal with threaded process connection. Large volume diaphragm for low pressure applications	14
W99015	Diaphragm Seal for block flange or saddle flange	14
W99018	Diaphragm Seal with 3A - FDA- din 11 851 connection	15
W99022	Diaphragm Seal with 3A - FDA- tri-clamp connection	15

Materials Body

- 316(L) Stainless Steel

Seal Process Connections

- 1/2" through 1" NPT or BSP threaded
- 1/2" /DN15 through 5" /DN125 flanged,
- 50-100-150-200 mm Extended Diaphragm
- Flushing Rings

Diaphragm Materials (wetted parts)

- 316L Stainless Steel
- Hastelloy C-276, C4, B2
- Monel K400
- Tantalum
- Titanium Grade 2
- Inconel 600
- Inconel 825
- Nickel

Note: Not all wetted parts materials are listed in the model numbers. Please contact your Yokogawa Representative for further informations.

Connection Ratings

- cl. 150# RF
 - cl. 300# RF
 - cl. 600# RF
 - cl. 150-2500 RF
 - PN10
 - PN40
 - PN10-400
 - Sanitary
- Acc. ASME B16.5
- Acc. DIN (EN)

Capillaries and Connections

- 316SS Armored Capillary
- 316SS PE Protected
- 316SS PVC Coated
- 316SS, direct mount tube

Functional Specifications (Common for DPharp EJA & EJX Pressure Transmitters)

*Refer to specific General Specification for more data

Output:

Two wire 4 to 20mA DC output with digital communications, linear or square root programmable. BRAIN or HART FSK protocol are superimposed on the 4 to 20mA signal. Output limits conforming to NAMUR NE43 can be pre-set by option code C2 or C3 (only factory settings). Digital Communication via Foundation Fieldbus or Profibus PA are also available.

Zero Adjustment Limits:

Zero can be fully elevated or suppressed, within the lower and upper range limits of the capsule.

External Zero Adjustment:

External Zero is continuously adjustable with 0.01% incremental resolution of span. Re-range can be done locally using the digital indicator with range-setting switch.

Ambient Temperature Limits:

(Optional features or approval codes may affect limits.)
-40 to 85 °C (-40 to 185 °F)
-30 to 80 °C (-22 to 176 °F) with LCD display.

Process temperature Limits:

Dependent on seal type and fill fluid selection.

Transmitter Capsule temperature Limits:

(Optional features or approval codes may affect limits.)
-40 to 120 °C (-40 to 248 °F)

Ambient Humidity Limits:

0 to 100% RH (EJX)
5 to 100% RH (EJA)

EMC Conformity Standard:

EN 61326, AS/NZS CISPR11

Supply Voltage:

10.5 to 42 VDC for general use and flameproof type
10.5 to 32 VDC for lightning protector (option code /A).
10.5 to 30VDC for intrinsically safe, type n or non-incendive
Minimum voltage limited at 16.6 VDC (EJX) and 16.4 VDC (EJA) for digital communication, BRAIN and HART

DPharp transmitters combined with Seals:

DP Transmitter EJX110A

Measurement Span/Range	kPa	inH ₂ O/(D1)	mbar/(D3)	mmH ₂ O/(D4)	
M	Span	0.5 to 100	2 to 400	5 to 1000	50 to 10000
	Range	-100 to 100	-400 to 400	-1000 to 1000	-10000 to 10000
H	Span	2.5 to 500	10 to 2000	25 to 5000	0.025 to 5 kgf/cm ²
	Range	-500 to 500	-2000 to 2000	-5000 to 5000	-5 to 5 kgf/cm ²
V	Span	0.07 to 14 MPa	10 to 2000 psi	0.7 to 140 bar	0.7 to 140 kgf/cm ²
	Range	-0.5 to 14 MPa	-71 to 2000 psi	-5 to 140 bar	-5 to 140 kgf/cm ²

For more details, please refer to the following GS:
EJX110A GS01C25B01-01E

DP Transmitter EJA110A

Measurement Span/Range	kPa	inH ₂ O/(D1)	mbar/(D3)	mmH ₂ O/(D4)	
M	Span	1 to 100	4 to 400	10 to 1000	100 to 10000
	Range	-100 to 100	-400 to 400	-1000 to 1000	-10000 to 10000
H	Span	5 to 500	20 to 2000	50 to 5000	0.05 to 5 kgf/cm ²
	Range	-500 to 500	-2000 to 2000	-5000 to 5000	-5 to 5 kgf/cm ²
V	Span	0.14 to 14 MPa	20 to 2000 psi	1.4 to 140 bar	1.4 to 140 kgf/cm ²
	Range	-0.5 to 14 MPa	-71 to 2000 psi	-5 to 140 bar	-5 to 140 kgf/cm ²

For more details, please refer to the following GS :
EJA110A GS01C21B01-00E

Gauge Pressure Transmitter EJX430A

For more details, please refer to the following GS :
EJX430A GS01C25E01-01E

Gauge Pressure Transmitter EJA430A

For more details, please refer to the following GS :
EJA430A GS01C21E01-01E

Absolute Pressure Transmitter EJX310A

For more details, please refer to the following GS :
EJX310A GS01C25D01-01E

Absolute Pressure Transmitter EJA310A

For more details, please refer to the following GS :
EJA310A GS01C21D01-01E

Absolute & Gauge Pressure Transmitter EJX510A, 530A

DFS seals can only be combined with Transmitter process connection "4" (1/2 "NPTf) or "W" (Welding connection for DFS)

Measurement Span/Range	MPa	psi (D1)	bar (D3)	kgf/cm ² (D4)	
A	Span	8 to 200 kPa	1.16 to 29	0.08 to 2	0.08 to 2
	Range	-100 to 200 kPa	-14.5 to 29	-1 to 2	-1 to 2
B	Span	0.04 to 2	5.8 to 290	0.4 to 20	0.4 to 20
	Range	-0.1 to 2	-14.5 to 290	-1 to 20	-1 to 20
C	Span	0.2 to 10	29 to 1450	2 to 100	2 to 100
	Range	-0.1 to 10	-14.5 to 1450	-1 to 100	-1 to 100
D	Span	1 to 50	145 to 7200	10 to 500	10 to 500
	Range	-0.1 to 50	-14.5 to 7200	-1 to 500	-1 to 500

For more details, please refer to the following GS :
EJX510A, EJX530A GS01C25F01-01E

Absolute & Gauge Pressure Transmitter EJA510A, 530A

DFS seals can only be combined with Transmitter process connection "4" (1/2 "NPTf) or "W" (Welding connection for DFS)

Measurement Span and Range	MPa	psi (D1)	bar (D3)	kgf/cm ² (D4)	
A	Span	10 to 200 kPa	1.45 to 29	0.1 to 2	0.1 to 2
	Range	0 to 200 kPa	0 to 29	0 to 2	0 to 2
B	Span	0.1 to 2	14.5 to 290	1 to 20	1 to 20
	Range	0 to 2	0 to 290	0 to 20	0 to 20
C	Span	0.5 to 10	72.5 to 1450	5 to 100	5 to 100
	Range	0 to 10	0 to 1450	0 to 100	0 to 100
D	Span	5 to 50	720 to 7200	50 to 500	50 to 500
	Range	0 to 50	0 to 7200	0 to 500	0 to 500

For more details, please refer to the following GS :
EJA510A, EJA530A GS01C21F01-00E & -02E

Fill Fluids

We provide a wide array of fill fluids, which will encompass the majority of applications. Table below shows the fill fluids available and the physical parameters of each.

MSCODE	Temperature limits	Description	Density	WIKA KN code
-A1	-40 to 300 C	Silicon Oil	0.96 at 25°C	2.2
-A2	-10 to 300 C	DC704	1.07 at 20°C	32
-B1	-90 to 180 C	Low Temperature Silicone Oil	0.914 at 20°C	17
-B2	-30 to 200 C	DC200 (10cSt)	0.934 at 25°C	68
-C1	-20 to 204 C	Neobee	0.92 at 20°C	59
-C2	-40 to 200 C	Syltherm 800	0.94 at 20°C	72
-D1	-10 to 400 C	High Temp/High Vac Silicon Oil	1.07 at 20°C	3.2
-E1	-40 to 175 C	Halocarbon (Inert fill), requires code	1.968 at 20°C	21
-E2	-10 to 120 C	Glycerine / Water	1.22 at 20°C	12
-J2	-10 to 260 C	Medicinal white mineral oil	0.852 at 15°C	92

Certificates

Following options are available (refer to specific models)
/C Calibration Certificate per unit
/M Material certificate to EN 10204 3.1
/NC NACE Certificate (only with 3.1 Mat. Cert. to EN 10204)
/DK Pressure test certificate acc. EN 10204 3.1

■ MODEL CODES SELECTION

- [WIKA Diaphragm Seals Product Overview](#)
- [Please select Diaphragm Seal page ...](#)



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W99040 A/D
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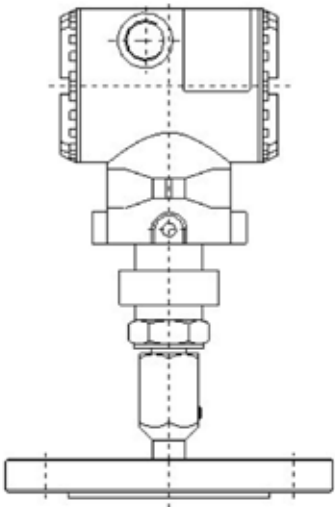
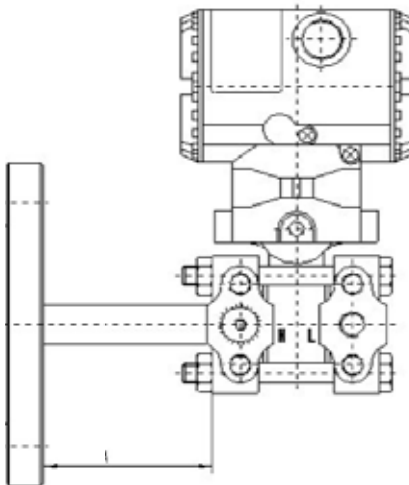
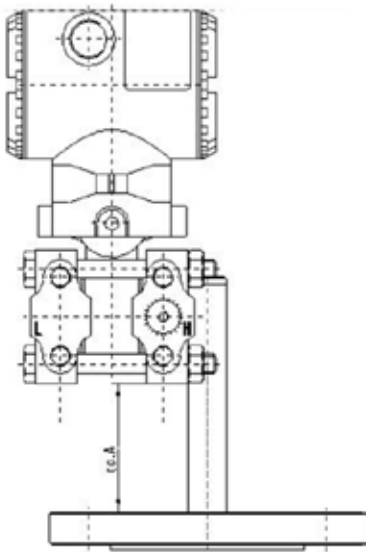
W99022 A/D
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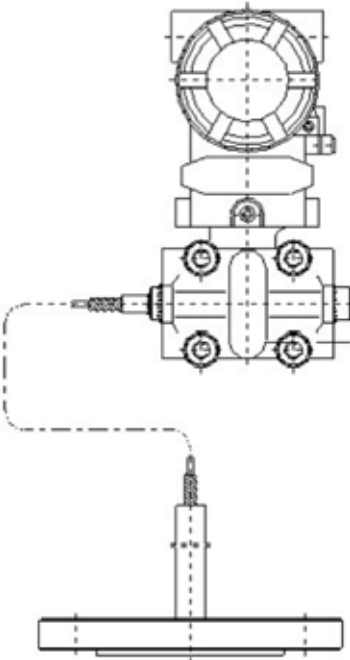
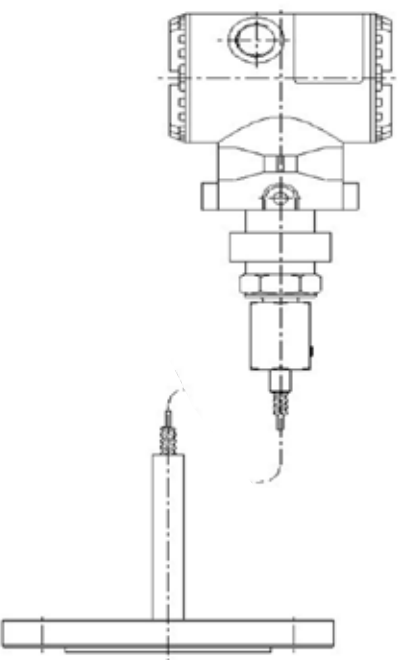
■ ASSEMBLY AND OPTIONS, SUFFIX CODES FOR ALL DIAPHRAGM SEALS

Please first select Diaphragm Seal W99 <input type="checkbox"/> <input type="checkbox"/> A/D from page 8 to 16.		
Fill Fluid	-A1 -A2 -B1 -B2 -C1 -C2 -D1 -D2 -E1 -E2 -G2 -J2	KN2.2 Silicon Oil -40 to 300C KN32 DC704 -10 to 300C KN17 Low Temperature Silicone Oil -90 to 180C KN68 DC200 (10cSt) -30 to 200C KN59 Neobee -20 to 204C KN72 Syltherm 800 -40 to 200C KN3.2 High Temp/High Vac Silicon Oil -10 to 400C KN7 Glycerine (Direct mount only) KN21 Halocarbon (Inert fill), requires code /K Field 14 -40 to 175C KN12 Glycerine / Water -10 to 120C DC 200-350 (Food Grade) KN92 Medicinal white mineral oil -10 to 260C
Assembly	DMT H10 H15 H20 V10 V15 V20 010 015 020 025 030 035 040 045 050 060 070 080 090 100 110 120 130 140 150	Thread Direct Mount (EJA/EJX 510, 530) Direct Horizontal Mount-Distance 4in (100mm) up to 200C Direct Horizontal Mount-Distance 6in (150mm) up to 250C Direct Horizontal Mount-Distance 8in (200mm) up to 300C Direct Vertical Mount-Distance 4in (100mm) up to 200C Direct Vertical Mount-Distance 6in (150mm) up to 250C Direct Vertical Mount-Distance 8in (200mm) up to 300C 1m Capillary 3ft (2mm Capillary ID Standard) 1.5m Capillary 5ft (2mm Capillary ID Standard) 2m Capillary 6ft (2mm Capillary ID Standard) 2.5m Capillary 8ft (2mm Capillary ID Standard) 3m Capillary 10ft (2mm Capillary ID Standard) 3.5m Capillary 12ft (2mm Capillary ID Standard) 4m Capillary 13ft (2mm Capillary ID Standard) 4.5m Capillary 15ft (2mm Capillary ID Standard) 5m Capillary 16ft (2mm Capillary ID Standard) 6m Capillary 20ft (2mm Capillary ID Standard) 7m Capillary 23ft (2mm Capillary ID Standard) 8m Capillary 26ft (2mm Capillary ID Standard) 9m Capillary 30ft (2mm Capillary ID Standard) 10m Capillary 33ft (2mm Capillary ID Standard) 11m Capillary 36ft (2mm Capillary ID Standard) 12m Capillary 40ft (2mm Capillary ID Standard) 13m Capillary 43ft (2mm Capillary ID Standard) 14m Capillary 46ft (2mm Capillary ID Standard) 15m Capillary 50ft (2mm Capillary ID Standard)
Capillary Type	N A B C D E F G	Direct-Mount SS Armored Capillary Tube PE Protected Capillary Tube, 0 to 5 m length PVC Coated Capillary Tube, 0 to 5 m length PE Protected Capillary Tube, 6 to 10 m length PVC Coated Capillary Tube, 6 to 10 m length PE Protected Capillary Tube, 11 m length and longer PVC Coated Capillary Tube, 11 m length and longer
Attachment	HN5 HLV DN5 DLV LN5 LLV TMT	High side with Transmitter supplied with N5/V option High side with LVC by Wika Both sides with Transmitter supplied with N5/V option Both sides with LVC by Wika Low side with Transmitter supplied with N5/V option Low side with LVC by Wika Thread Mount, EJA/X500
Options available for all models	/06 /10 /15 /W /V /HV /K /C /M /NC /DK	0.6mm Capillary ID 1.0mm Capillary ID 1.5mm Capillary ID fully welded version (no gaskets between process flange and capsule) Vacuum Service (>500 mbara and <100 °C) High Vacuum Service Degreased (use with Inert fill KN21 for O2 service) Calibration Certificate per unit Material certificate to EN 10204 3.1 NACE Certificate (only in combination with /M) Pressure test certificate acc. EN 10204 3.1
Options available for sanitary versions only W99018 or W99022	/FD /ES /EH /3A	FDA-certificate for filling fluid Electro-polished finish (body + wetted parts) SS 316L Electro-polished finish (body + wetted parts) Hastelloy C276 3-A Sanitary standard marked on diaphragm seal

EXPLANATION TO THE ASSEMBLY OF DIAPHRAGM SEALS

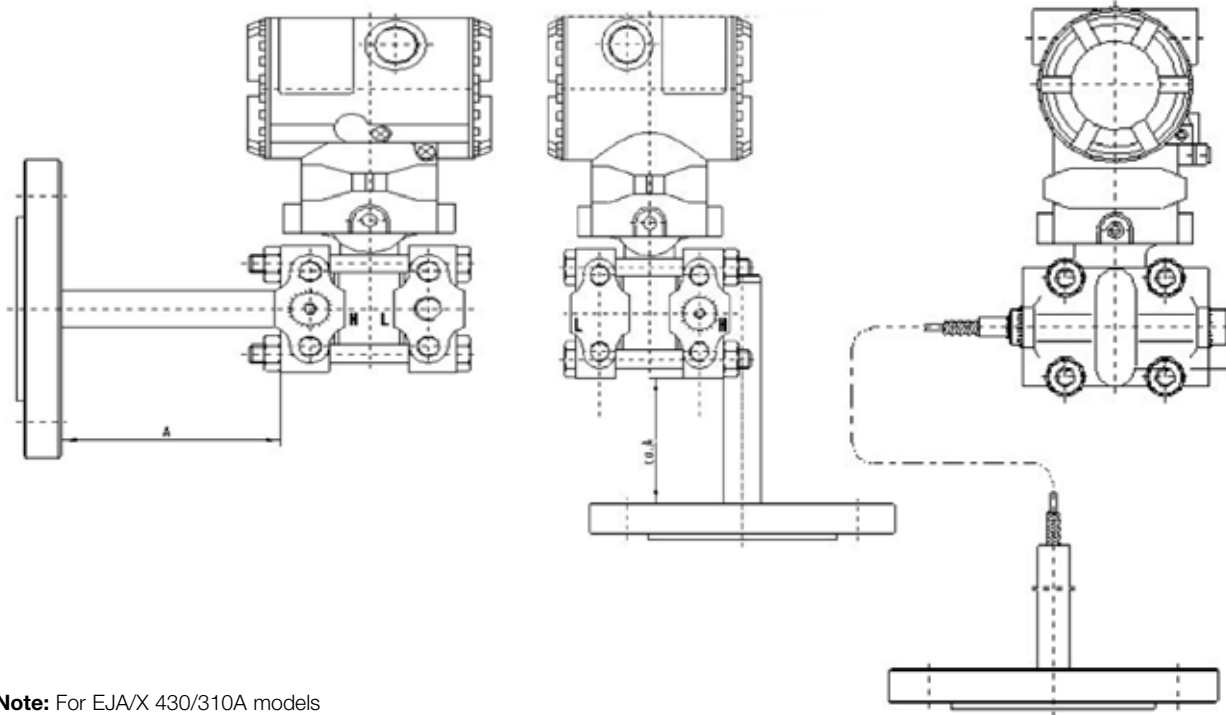
Assembly

<p>DMT Thread Direct Mount (EJA/EJX 510, 530)</p> 	<p>H10 Direct Horizontal Mount-Distance 4in (100mm) up to 200C H15 Direct Horizontal Mount-Distance 6in (150mm) up to 250C H20 Direct Horizontal Mount-Distance 8in (200mm) up to 300C</p> 	<p>V05 Direct Vertical Mount-Distance 2.75in (70mm) up to 100C V10 Direct Vertical Mount-Distance 4in (100mm) up to 200C V15 Direct Vertical Mount-Distance 6in (150mm) up to 250C V20 Direct Vertical Mount-Distance 8in (200mm) up to 300C</p> 
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<p>010 1m/3ft Capillary 015 1.5m/5ft Capillary 020 2m/6ft Capillary 025 2.5m/8ft Capillary 030 3m/10ft Capillary 035 3.5m/12ft Capillary 040 4m/13ft Capillary 045 4.5m/15ft Capillary 050 5m/16ft Capillary 060 6m/20ft Capillary 070 7m/23ft Capillary 080 8m/26ft Capillary 090 9m/30ft Capillary 100 10m/33ft Capillary</p>		
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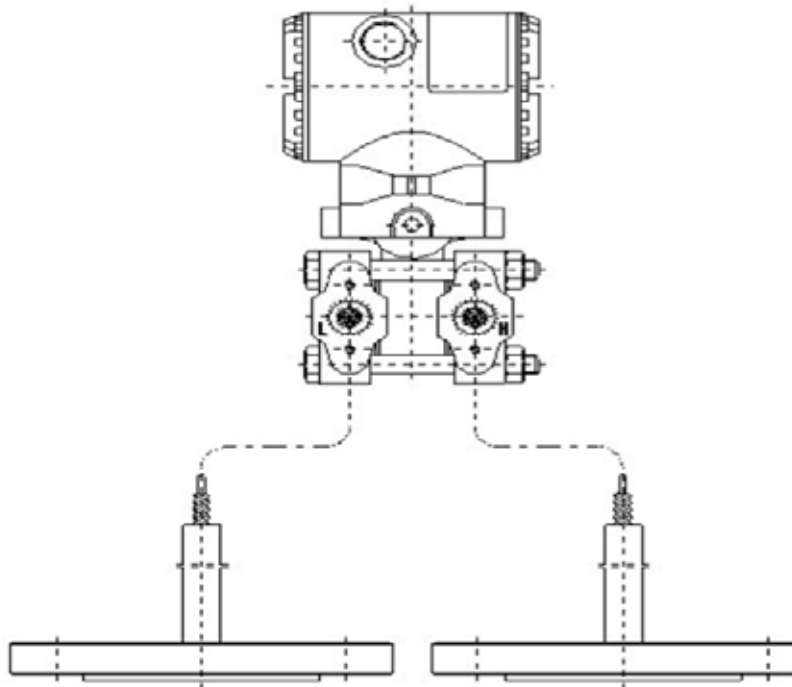
Attachment

HN5 High side with Transmitter supplied with /N5 option
 or HLV High side with Low Volume Chamber by WIKA. Transmitter supplied without /N5 option



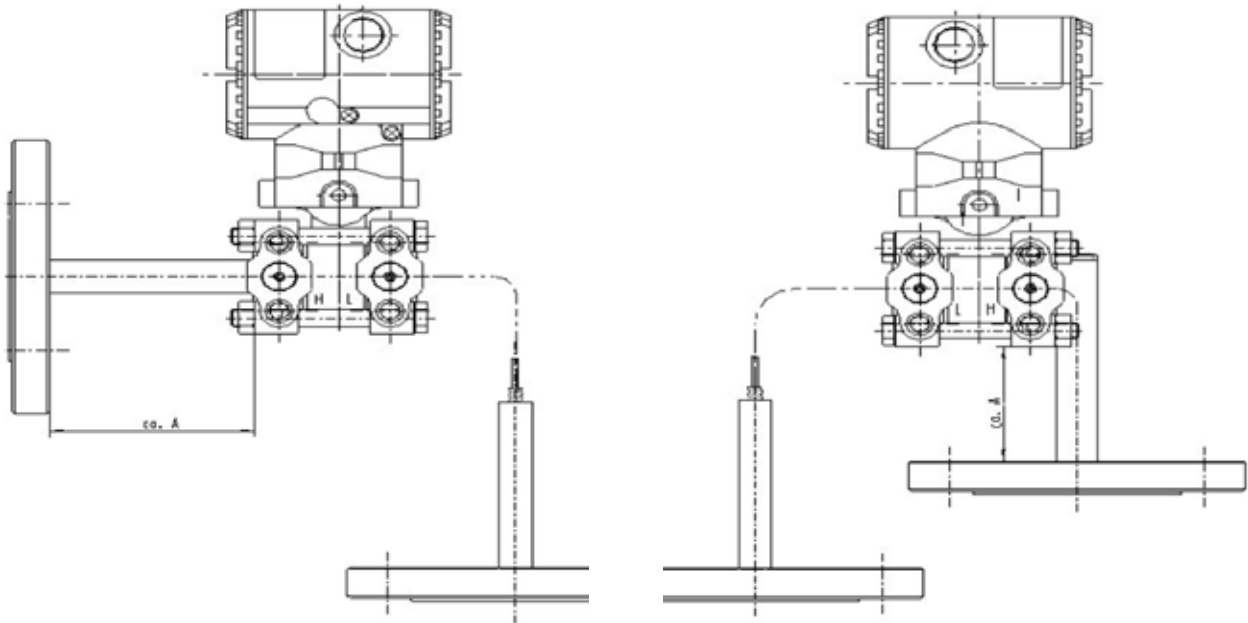
Note: For EJAX 430/310A models
 For EJAX 110A models (1 seal HP side)

DN5 Both side with Transmitter supplied with /N5 option
 or DLV Both side with Low Volume Chamber (LVC) by WIKA



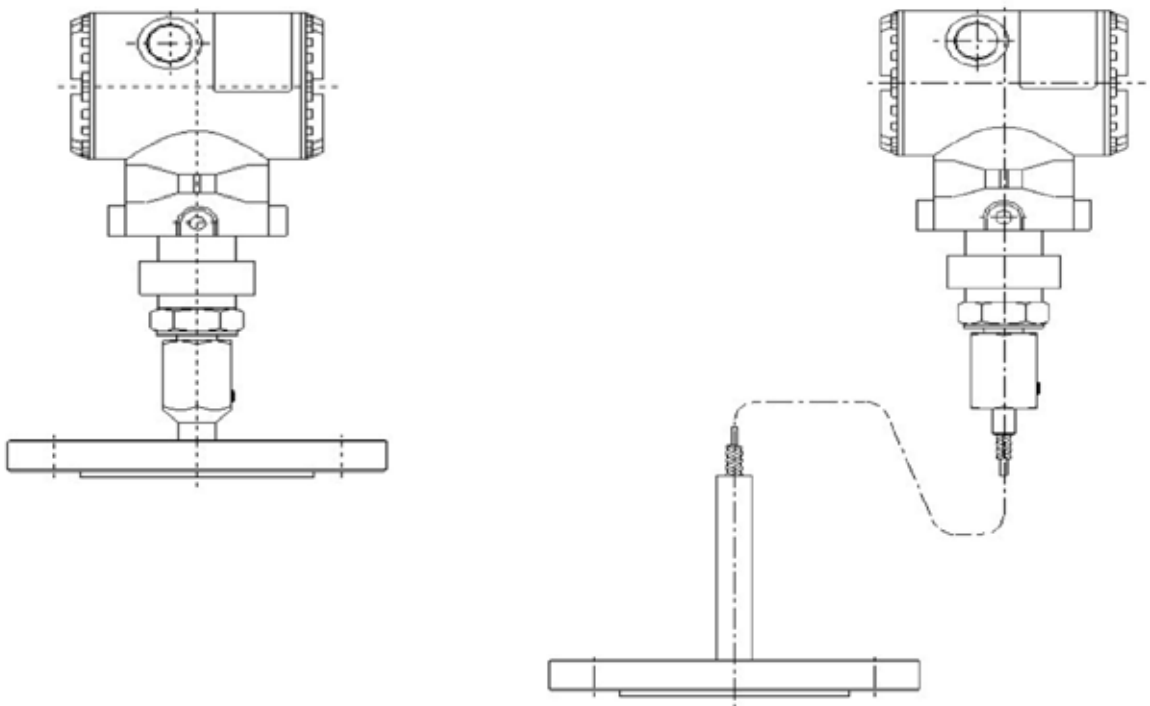
Note: For EJAX 110A models

HN5 or HLV High side
LN5 or LLV Low side



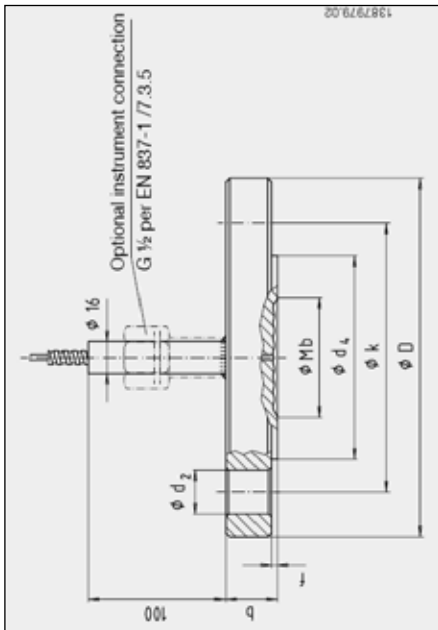
Note: For EJAX 110A models

TMT Thread Mount (EJA/EJX 510, 530)



Note: For EJAX 510/530A models

**W99027A or W99027D
Diaphragm seal
Flush diaphragm,
flanged type ASME
or flanged type EN**



Model	Suffixcode	Description Flush Diaphragm	
		Flange ASME	Flange EN
W99027A/D			
Flange	-10A	ASME 1.0" class 150	EN DN 25 PN 10-16
Connection	-10B	ASME 1.0" class 300	EN DN 25 PN 25-40
Size and rating	-10C		EN DN 25 PN 63
	-10D	ASME 1.0" class 600	EN DN 25 PN 100
	-10E	ASME 1.0" class 900	EN DN 25 PN 160
	-10F	ASME 1.0" class 1500	EN DN 25 PN 250
	-10H	ASME 1.0" class 2500	EN DN 25 PN 400
	-15A	ASME 1.5" class 150	EN DN 40 PN 10-16
	-15B	ASME 1.5" class 300	EN DN 40 PN 25-40
	-15C		EN DN 40 PN 63
	-15D	ASME 1.5" class 600	EN DN 40 PN 100
	-15E	ASME 1.5" class 900	EN DN 40 PN 160
	-15F	ASME 1.5" class 1500	EN DN 40 PN 250
	-15H	ASME 1.5" class 2500	EN DN 40 PN 400
	-20A	ASME 2.0" class 150	EN DN 50 PN 10-16
	-20B	ASME 2.0" class 300	EN DN 50 PN 25-40
	-20C		EN DN 50 PN 63
	-20D	ASME 2.0" class 600	EN DN 50 PN 100
	-20E	ASME 2.0" class 900	EN DN 50 PN 160
	-20F	ASME 2.0" class 1500	EN DN 50 PN 250
	-20H	ASME 2.0" class 2500	EN DN 50 PN 400
	-30A	ASME 3.0" class 150	EN DN 80 PN 10-16
	-30B	ASME 3.0" class 300	EN DN 80 PN 25-40
	-30C		EN DN 80 PN 63
	-30D	ASME 3.0" class 600	EN DN 80 PN 100
	-30E	ASME 3.0" class 900	EN DN 80 PN 160
	-30F	ASME 3.0" class 1500	EN DN 80 PN 250
	-30H	ASME 3.0" class 2500	EN DN 80 PN 400
	-40A	ASME 4.0" class 150	EN DN 100 PN 10-16
	-40B	ASME 4.0" class 300	EN DN 100 PN 25-40
	-40C		EN DN 100 PN 63
	-40D	ASME 4.0" class 600	EN DN 100 PN 100
	-40E	ASME 4.0" class 900	EN DN 100 PN 160
	-40F	ASME 4.0" class 1500	EN DN 100 PN 250
	-40H	ASME 4.0" class 2500	EN DN 100 PN 400
	-50A	ASME 5.0" class 150	EN DN 125 PN 10-16
	-50B	ASME 5.0" class 300	EN DN 125 PN 25-40
	-50C		EN DN 125 PN 63
	-50D	ASME 5.0" class 600	EN DN 125 PN 100
	-50E	ASME 5.0" class 900	EN DN 125 PN 160
	-50F	ASME 5.0" class 1500	EN DN 125 PN 250
	-50H	ASME 5.0" class 2500	EN DN 125 PN 400
Always	N	Always	
Sealing Face	1 (SS wetted only) 3 (SS wetted only) 4 (all wetted parts)	ASME RF125-250 AA ASME RJF Groove ASME RFSF	EN form B1 EN form D EN form B2
All Wetted Parts, (Body material is 316L)	-SS1 -SS2 -HA1 -HA2 -HA3 -MO1 -IN1 -IN2 -TA1 -NI1 -TI1 -ST1 -SP1 -SE1 -SG1	SS 316L SS 316TI, 1.4571 Hastelloy C276, 2.4819 Hastelloy B2, 2.4617 Hastelloy C4, 2.4610 Monel 400, 2.4360 Incoloy 825, 2.4858 Inconel 600, 2.4816 Tantalum Nickel 2.4066 / 2.4068 Titanium Grade 2, 3.7035 SS 316L with PTFE foil SS 316L with PFA coating SS 316L with ECTFE coating SS 316L with gold plating 25um	
Gasket	N	None	
Flushing Ring	N A B C D	No SS 316L DN50 SS 316L DN80 Hastelloy C276, 2.4819 DN50 Hastelloy C276, 2.4819 DN80	
Flushing Ring connection with plugs	0 1 2 3 4	None Dual 1/4" Dual 1/2" Single 1/4" Single 1/2"	

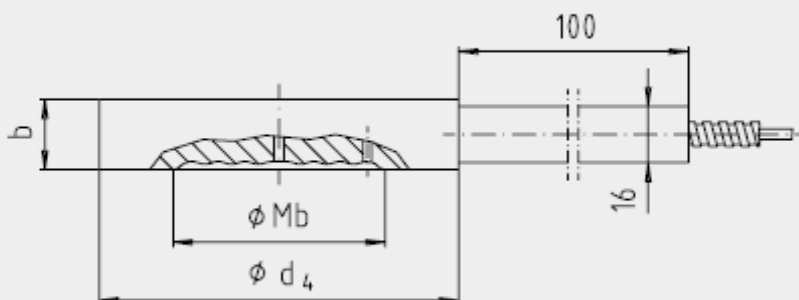
W99028A
Flush Diaphragm Pancake Flange ASME

W99028B
Flush Diaphragm Pancake Flange EN



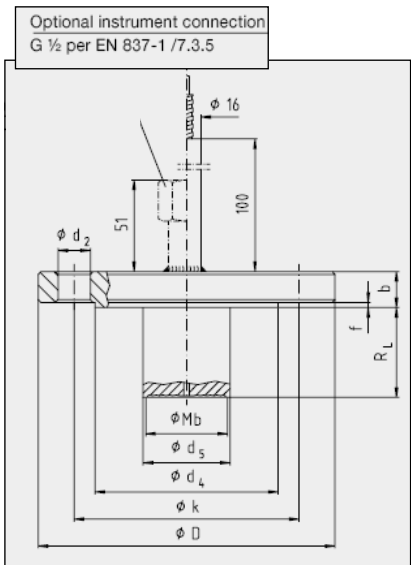
Model	Suffixcode	Description Flush Diaphragm
W99028A		Pancake Flange ASME
W99028D		Pancake Flange EN
Pancake Size Note 1)	-15 -20 -30 -40	ASME 1.0" ASME 1.5" ASME 2.0" ASME 3.0"
Flange rating	N	According to used back up flange
Always	N	Always N
Sealing Face	1 (SS wetted only) 3 (SS wetted only) 4 (all wetted parts)	ASME RF125-250 AA ASME RjF Groove; flange rating required ASME RFSF
All Wetted Parts, (Body material is 316L)	-SS1 -SS2 -HA1 -HA2 -HA3 -MO1 -IN1 -IN2 -TA -NI1 -TI1 -ST1 -SP1 -SE1 -SG1	SS 316L SS 316Ti, 1.4571 Hastelloy C276, 2.4819 Hastelloy B2, 2.4617 Hastelloy C4, 2.4610 Monel 400, 2.4360 Incoloy 825, 2.4858 Inconel 600, 2.4816 Tantalum Nickel 2.4066 / 2.4068 Titanium Grade 2, 3.7035 SS 316L with PTFE foil SS 316L with PFA coating SS 316L with ECTFE coating SS 316L with gold plating 25um
Gasket	N	None
Flushing Ring (lower housing)	N A B C D	No SS 316L DN50 SS 316L DN80 Hastelloy C276, 2.4819 DN50 Hastelloy C276, 2.4819 DN80
Flushing Ring connection with plugs	0 1 2 3 4	None Dual 1/4" Dual 1/2" Single 1/4" Single 1/2"

Assembly and options SUFFIX CODES Page 4



Note 1) Counter Flanges are not supplied. Pressure rating depends on the counter flange to be mounted.

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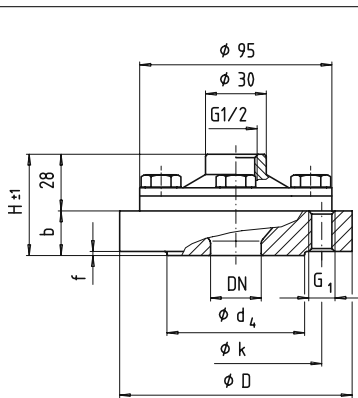


Model	Suffixcode	Description Extended Flush Diaphragm	
W99029A		Flange ASME	
W990029D		Flange EN	
Flange Connection Size and rating	-20A Extension OD=1.90"/48,3mm -20B Extension OD=1.90"/48,3mm -20C Extension OD=1.90"/48,3mm -20D Extension OD=1.90"/48,3mm -20E Extension OD=1.90"/48,3mm -20F Extension OD=1.90"/48,3mm -30A Extension OD=2.99"/76,0mm -30B Extension OD=2.99"/76,0mm -30C Extension OD=2.99"/76,0mm -30D Extension OD=2.99"/76,0mm -30E Extension OD=2.99"/76,0mm -30F Extension OD=2.99"/76,0mm -40A Extension OD=3.70"/94,0mm -40B Extension OD=3.70"/94,0mm -40C Extension OD=3.70"/94,0mm -40D Extension OD=3.70"/94,0mm -40E Extension OD=3.70"/94,0mm -40F Extension OD=3.70"/94,0mm -50A Extension OD=4.92"/125mm -50B Extension OD=4.92"/125mm -50C Extension OD=4.92"/125mm -50D Extension OD=4.92"/125mm -50E Extension OD=4.92"/125mm -50F Extension OD=4.92"/125mm	ASME 2.0" class 150 ASME 2.0" class 300 ASME 2.0" class 600 ASME 2.0" class 900 ASME 2.0" class 1500 ASME 3.0" class 150 ASME 3.0" class 300 ASME 3.0" class 600 ASME 3.0" class 900 ASME 3.0" class 1500 ASME 4.0" class 150 ASME 4.0" class 300 ASME 4.0" class 600 ASME 4.0" class 900 ASME 4.0" class 1500 ASME 5.0" class 150 ASME 5.0" class 300 ASME 5.0" class 600 ASME 5.0" class 900 ASME 5.0" class 1500	EN DN 50 PN 10/16 EN DN 50 PN 25/40 EN DN 50 PN 63 EN DN 50 PN 100 EN DN 80 PN 10/16 EN DN 80 PN 25/40 EN DN 80 PN 63 EN DN 80 PN 100 EN DN 100 PN 10/16 EN DN 100 PN 25/40 EN DN 100 PN 63 EN DN 100 PN 100 EN DN 125 PN 10/16 EN DN 125 PN 25/40 EN DN 125 PN 63 EN DN 125 PN 100
Extension Length	2 4 6 8	2", 50mm Extension 4", 100mm Extension 6", 150mm Extension 8", 200mm Extension	
Sealing Face	1 (SS wetted only) 3 (SS wetted only) 4 (all wetted parts)	ASME RF125-250 AA ASME RJF Groove ASME RFSF	EN Form B1 EN Form D Groove EN Form B2
All Wetted Parts, (Body material is 316L)	-SS1 -SS2 -20HA1 -30HA1 -40HA1 -20HA2 -30HA2 -40HA2 -20HA3 -30HA3 -40HA3 -20MO1 -30MO1 -40MO1 -20IN1 -30IN1 -40IN1 -20IN2 -30IN2 -40IN2 -20TA1 -30TA1 -40TA1 -SP1 -SE1 -20SG1 -30SG1 -40SG1	SS 316L SS 316TI, 1.4571 Hastelloy C276, 2.4819 (Up to 2") Hastelloy C276, 2.4819 (Up to 3") Hastelloy C276, 2.4819 (Up to 4") Hastelloy B2, 2.4617 (Up to 2") Hastelloy B2, 2.4617 (Up to 3") Hastelloy B2, 2.4617 (Up to 4") Hastelloy C4, 2.4610 (Up to 2") Hastelloy C4, 2.4610 (Up to 3") Hastelloy C4, 2.4610 (Up to 4") Monel 400, 2.4360 (Up to 2") Monel 400, 2.4360 (Up to 3") Monel 400, 2.4360 (Up to 4") Incoloy 825, 2.4858 (Up to 2") Incoloy 825, 2.4858 (Up to 3") Incoloy 825, 2.4858 (Up to 4") Inconel 600, 2.4816 (Up to 2") Inconel 600, 2.4816 (Up to 3") Inconel 600, 2.4816 (Up to 4") Tantalum (Up to 2") Tantalum (Up to 3") Tantalum (Up to 4") SS 316L with PFA coating SS 316L with ECTFE coating SS 316L with gold plating 25um Up to DN50) Diaphragm only SS 316L with gold plating 25um Up to DN80) Diaphragm only SS 316L with gold plating 25um Up to DN100) Diaphragm only	
Gasket	N	None	
Flushing Ring	N	Not Applicable	
Flushing Ring connection	0	Not Applicable	

Assembly and options SUFFIX CODES Page 4

OD = Outer Diameter

**W99012A or W99012D
Diaphragm Seal with
flange process connection,
ASME or EN. Threaded design**



Model	Suffix code	Internal Diaphragm, Threaded Design	
W99012A		Flange ASME	
W99012D		Flange EN	
Flange	-05	ASME 1/2"	EN DN 15
Connection	-07	ASME 3/4"	EN DN 20
Size	-10	ASME 1"	EN DN 25
	-15	ASME 1 1/2"	EN DN 40
	-20	ASME 2"	EN DN 50
Flange rating	A	ASME Class 150	EN PN 10/16
	B	ASME Class 300	EN PN 25/40
	C		EN PN 63
	D	ASME Class 600	EN PN 100
	E		EN PN 160
	F	ASME Class 900/1500	EN PN 250
	N	None	None
Sealing Face	1 (SS wetted only) 3 (SS wetted only) 4 (all wetted parts)	ASME RF125-250 AA ASME RJF Groove ASME RFSF	EN Form B1 EN Form D Groove EN Form B2
All Wetted Parts, (Body material is 316L)	-SS1 -HA1 -TA1 -MO1 -ST1	SS 316L Hastelloy C276, 2.4819 Tantalum Monel 400, 2.4360 SS 316L with PTFE foil	
Gasket between upper part and lower part	A B C D	FPM (max. 200 °C) PTFE (max. 260 °C) Metal Seal Form C, SS/Silver (max. 400 °C; SS wetted only) Metal Seal Form C, Inconel/Silver (max. 400 °C; SS wetted only)	
Assembly bolts between upper part and lower part	A B	SS 304 (max. 260 °C) High tensile bolts, 1.7709 (max. 400 °C)	
Flushing Conn. without plugs, (Material can be different as seal material)	0 1 3 6 8	None Dual 1/4" (SS 316L) Single 1/4" (SS 316L) Dual 1/4" (Hastelloy C276 / Monel 400) Single 1/4" (Hastelloy C276 / Monel 400)	
<i>Assembly and options SUFFIX CODES Page 4</i>			

**W99026A or W99026D
Diaphragm Seal with flange process connection,
ASME or EN. Welded design**



Model	Suffixcode	Description, Internal Diaphragm, Welded Design	
W99026A		Flange ASME	
W99026D		Flange EN	
Flange	-05	ASME 1/2"	EN DN 15
Connection	-07	ASME 3/4"	EN DN 20
Size	-10	ASME 1"	EN DN 25
Flange rating	A B N	ASME Class 150 ASME Class 300 None	EN PN 25/40 None
Sealing Face	1 (SS wetted only) 4 (all wetted parts)	ASME RF125-250 AA ASME RFSF	EN Form B1 EN Form B2
All Wetted Parts, (Body material is 316L)	-SS1 -HA1 -TA1 -MO1 -ST1	SS 316L Hastelloy C276, 2.4819 Tantalum Monel 400, 2.4360 SS 316L with PTFE foil	
Gasket between upper part and lower part	N	None	
Flushing Ring (Lower Housing)	N	None	
Flushing Connection	0 P	None	
<i>Assembly and options SUFFIX CODES Page 4</i>			

W99041A or W99041D
Diaphragm Seal with flange process connection
large diaphragm volume for low pressure applications
ASME or EN Flanges



Model	Suffixcode	Description, Large Volume, Internal Diaphragm, Threaded Design	
W99041A		Flange ASME	
W99041D			Flange EN
Size for Connection thread	-05 -07 -10 -15 -20	ASME 1/2" ASME 3/4" ASME 1" ASME 1 1/2" ASME 2"	EN DN15 EN DN 20 EN DN25 EN DN40 EN DN50
Connection Rating	A B C D	ASME Class 150 (Diaph. D89mm) ASME Class 300 (Diaph. D89mm) ASME Class 600 (Diaph. D89mm)	PN63 (Diaph. D89mm)
Always	N	always	
Sealing Face	1 3 4	ASME RF125-250 AA ASME R/JF Groove (SS wetted only) ASME RFSF	
Wetted Parts Diaphragm Material (Body SS 316L)	-SS1 -HA1 -MO1 -TA1 -ST1	SS 316L Hastelloy C276, 2.4819 Monel 400, 2.4360 Tantalum SS 316L with PTFE foil	
Gasket between upper body and lower body	B E F	PTFE (max. 260 °C) Grafit (max. 400 °C) Viton (max. 200 °C) Diaph. D89 only	
Wetted Parts Lower Housing	A C E	SS 316L Hastelloy C276, 2.4819 Monel 400, 2.4360	
Flushing Connection without plugs	0 1 2 3 4 6 7 8 9	None Dual 1/4" (Lower Housing 316L) Dual 1/2" (Lower Housing 316L) Single 1/4"(Lower Housing 316L) Single 1/2" (Lower Housing 316L) Dual 1/4" (Lower Housing Haselloy C276) Dual 1/2" (Lower Housing Haselloy C276) Single 1/4"(Lower Housing Haselloy C276) Single 1/2" (Lower Housing Haselloy C276)	
<i>Assembly and options SUFFIX CODES Page 4</i>			

W99010A

Diaphragm Seal with threaded process connection
To be chosen when you need to increase the diaphragm size
without changing the supplied proces connector



Model	Suffixcode	Description
W99010		Thread, Internal Diaphragm, Threaded Design
Thread connection	-02 -05 -07 -10	1/4" 1/2" 3/4" 1"
Flange rating	D F	PN 100 bar PN 250 bar
Connection Thread type	NM NF BM BF	NPT male NPT female BSP male BSP female
Sealing Face	0	None
All Wetted Parts, (Body material is 316L)	-SS1 -SS2 -HA1 -HA2 -HA3 -MO1 -IN1 -IN2 -TA1 -ST1	SS 316L SS 316TI, 1.4571 Hastelloy C276, 2.4819 Hastelloy B2, 2.4617 Hastelloy C4, 2.4610 Monel 400, 2.4360 Incoloy 825, 2.4858 Inconel 600, 2.4816 Tantalum (1/2" BSP male only) SS 316L with PTFE foil (1/2" BSP male only)
Gasket between upper part and lower part	A B C D	FPM (max. 200 °C) PTFE (max. 260 °C) Metal Seal Form C, SS/Silver (max. 400 °C; SS wetted only) Metal Seal Form C, Inconel/Silver (max. 400 °C; SS wetted only)
Assembly bolts between upper part and lower part	A B	SS 304 (max. 260 °C) High tensile bolts, 1.7709 (max. 400 °C)
Flushing Conn. without plugs, (Material can be different as seal material)	0 1 3 6 8	None Dual 1/4" (SS 316L) Single 1/4" (SS 316L) Dual 1/4" (Hastelloy C276 / Monel 400) Single 1/4" (Hastelloy C276 / Monel 400)

Assembly and options SUFFIX CODES Page 4

W99040
Diaphragm Seal with threaded process connection
Large volume diaphragm for low pressure applications



Model	Suffixcode	Description
W99040		Thread, Large Volume, Internal Diaphragm, Threaded Design
Size for Connection thread	-05 -07 -10 -15 -20	1/2" 3/4" 1" 1 1/2" 2"
Connection Rating	D	PN100bar / Diaphr. D89mm
Connection Thread type	NM NF BM BF	NPT male NPT female BSP male BSP female
Sealing Face	0	None
Wetted Parts	-SS1	SS 316L
Diaphragm Material (Body SS 316L)	-HA1 -MO1 -TA1 -ST1	Hastelloy C276, 2.4819 Monel 400, 2.4360 Tantalum SS 316L with PTFE foil
Gasket	B E F	PTFE (max. 260 °C) Grafit (max. 400 °C) Viton (max. 200 °C) Diaphr. D89 only
Wetted Parts Lower Housing	A	SS 316L
Flushing Connection without plugs	C E 0	Hastelloy C276, 2.4819 Monel 400, 2.4360 None

Assembly and options SUFFIX CODES Page 4

W99015
Diaphragm Seal for block flange or saddle flange



Model	Suffixcode	Description
W99015		Saddle, Flush Diaphragm
Identify	EJAM EJXM EJAD EJXD	EJA100/300/400 (L capsule excluded) series EJX100/300/400 (L capsule excluded) series EJA500 (welding connection is preferred) EJX500 (welding connection is preferred)
Connection Size (Nominal Pipe Size)	-00 -30 -40 -60 -80 -A0 -A2	WIKA Retrofit (Existing Saddle) EN DN80 / ASME 3.0" EN DN 100 / ASME 4.0" EN DN 150 / ASME 6.0" EN DN 200 / ASME 8.0" EN DN 250 / ASME 10.0" EN DN 300 / ASME 12.0"
Connection Rating	D	PN100bar / Diaphr. D89mm
Assembly Hardware	S	Stainless Steel
Sealing Face	0	None
Wetted Parts Diaphragm Material (Body SS 316L)	-SSS -SHC -STA -SMM	SS 316L Hastelloy C276, 2.4819 Tantalum Monel 400, 2.4360
Gasket between upper body and saddle	A B	FPM (up to 200 °C) PTFE (up to 260 °C)
Material Saddle	A C	SS 316L Hastelloy C276, 2.4819
Flushing Connection	0	None

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W99018
Diaphragm Seal with 3A - FDA- din 11 851 connection



Model	Suffixcode	Description
W99018		Sanitary, Din 11851
Connection Size (Nominal Pipe Size)	-15 -20 -30	DN 40 DN 50 DN 80
Connection Rating	N	according to used clamp
Always	N	None
Sealing Face	0	always
Body Material + All wetted parts	SS1 HA1	SS 316L Hastelloy C276, 2.4819
Gasket	N	None
Lower housing	N	None
Flushing Connection	0	None
<i>Assembly and options SUFFIX CODES Page 4</i>		

W99022
Diaphragm Seal with 3A - FDA- tri-clamp connection



Model	Suffixcode	Description
W99022		Sanitary, TriClamp
Connection Size (Nominal Pipe Size)	-10 -15 -20 -25 -30 -40	1.0" 1.5" 2.0" 2.5" 3.0" 4.0"
Connection Rating	N	according to used clamp
Always	N	None
Sealing Face	0	always
Body Material + All wetted parts	SS1 HA1	SS 316L Hastelloy C276, 2.4819
Gasket	N	None
Lower housing	N	None
Flushing Connection	0	None
<i>Assembly and options SUFFIX CODES Page 4</i>		

Note: For supply of mounting clamps & accessories, please contact your nearest Yokogawa representative.

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