

The FSO-USLF construction is similar to the USLF design and typically used for those applications where the existing process connection is too small to use a flush mounted diaphragm seal. The specific advantage for the FSO-USLF is the efficient design with regards to exotic materials as the lower part is significantly smaller and also has a smaller weight. Also it allows for more flexibility in the different cover flange materials e.g. for pressure rating. And bolting pattern is standard as per the cover flange. FSO-USLF is typically used in combination with (differential) pressure transmitters for applications such as level, flow and (absolute) pressure measurement. The FSO-USLF has a large diaphragm and allows for measurement of low ranges (up to 10 mbar double (2) seals attached (dP); 80 mbar single seal attached).



STANDARD EXECUTION

DIAPHRAGM	BODY	MOUNTING CONNECTION
AISI 316(L)	AISI 316(L)	top (axial)
FACING	FACING TYPE	GASKET
RF	B1	Virgin PTFE

FLANGED PROCESS CONNECTIONS

ASME B16.5

size	rating	dD
1,5"	cl. 300 – cl. 600	81.0mm
2"	cl. 300 – cl. 600	81.0mm

EN 1092-1

size	rating	dD
DN40	PN63 – PN100	81.0mm
DN50	PN40 – PN100	81.0mm

UPPER AND LOWER PART ASSEMBLY

GASKET

material	operating temperature
Virgin PTFE	-200 / +260°C
Garfite N	-73 / +343°C
Camprofile ¹	-200 / + 500°C

¹ for steam applications

WETTED PARTS, BODY MATERIALS, AND FACING OPTIONS

upper part material	Lower part material	diaphragm material	facing (ASME B16.5)		facing type (EN 1092-1)	
AISI 316(L)	AISI 316(L)	AISI 304(L)	RF	Ra 3.2-6.3 µm	B1	Ra 3.2-12.5 µm
		AISI 316(L)	RJF	Ra <1.6 µm	B2	Ra 0.8-3.2 µm
		AISI 316 UG	LMF	Ra 3.2-6.3 µm	C	Ra 0.8-3.2 µm
		AISI 321	SMF	Ra <3.2 µm	D	Ra 0.8-3.2 µm
		Hastelloy C-276	LTF	Ra <3.2 µm	E	Ra 3.2-12.5 µm
AISI 316(L)	AISI 310 MoLn	AISI 310 MoLn	STF	Ra <3.2 µm	F	Ra 3.2-12.5 µm
AISI 316(L)	Hastelloy B2	Hastelloy B2	LGF	Ra <3.2 µm	G	Ra 0.8-3.2 µm
AISI 316(L)	Hastelloy C22	Hastelloy C22	SGF	Ra <3.2 µm	H	Ra 0.8-3.2 µm
AISI 316(L)	Hastelloy C276	Hastelloy C276	LFF	Ra 3.2-6.3 µm		
AISI 316(L)	Duplex F44	6MO	SFF	Ra <3.2 µm		
AISI 316(L)	Duplex F51/F60	Duplex 2205				
AISI 316(L)	Duplex F53	Super Duplex 2507				
AISI 316(L)	Duplex F55	Super Duplex 2507				
AISI 316(L)	Inconel 600	Inconel 600				
AISI 316(L)	Inconel 625	Inconel 625				
AISI 316(L)	Inconel 825	Inconel 825				
AISI 316(L)	Monel 400	Monel 400				
AISI 316(L)	Nickel 201	Nickel 201				
Titanium Gr.2	Titanium Gr.2	Titanium Gr.1				

COATING AND OTHER OPTIONS

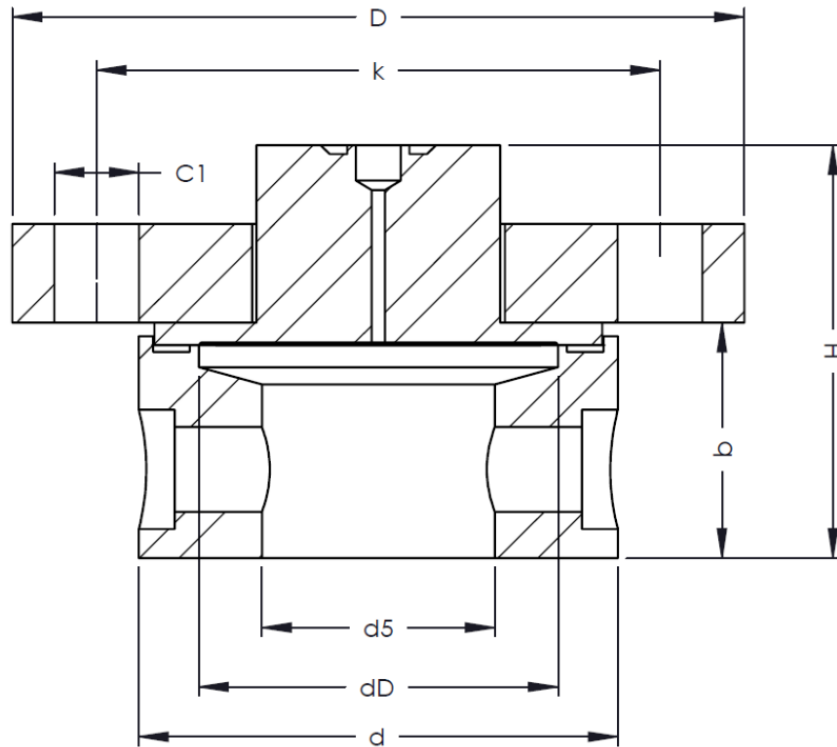
COATINGS

- gold: 25 μm / 40 μm hydrogen permeation protection (diaphragm)
- PTFE / ECTFE for anti-stick purpose only (upper part)
- FEP / PFA (upper part)
- PTFE lining lower part (not in combination with flush)

OTHER OPTIONS

- heavy duty capillary tube
- TR - temperature reducer
- TC - temperature compensator
- flushing ports in lower part (not in combination with lining)
- degreasing of wetted parts

DRAWING AND DIMENSIONS STANDARD EXECUTIONS



ASME B16.5 - RF FACING

size	rating	facing	dD	D	K	C1	H	d	d5	b
1,5"	cl. 300	RF	81.0	155.0	114.3	22.2	108.0	108.0	40.9	37.5
1,5"	cl. 400-600	RF	81.0	155.0	114.3	22.2	108.0	108.0	40.9	37.5
2"	cl. 300	RF	81.0	165.0	127.0	19.5	108.0	108.0	52.5	37.5
2"	cl. 400-600	RF	81.0	165.0	127.0	19.5	108.0	108.0	52.5	37.5

All dimensions in mm

Note: size b & H are based on 1/2" NPT flush connection

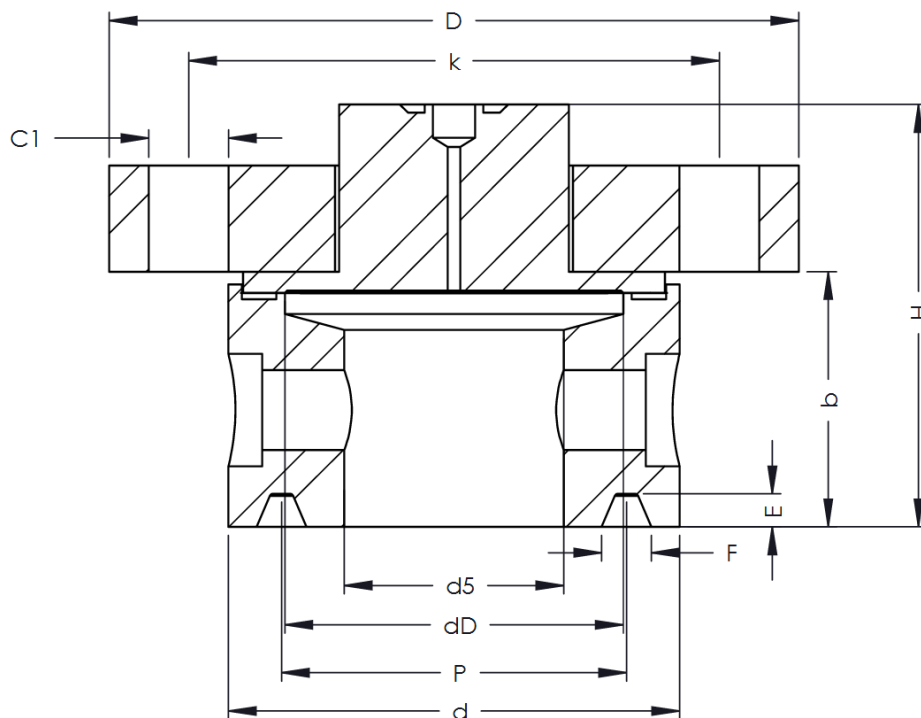
EN 1092-1 - TYPE B1

size	Rating	type	dD	D	K	C1	H	d	d5	b
DN40	PN63-100	B1	81.0	170.0	125.0	22.0	108.0	108.0	43.1	37.5
DN50	PN40	B1	81.0	165.0	125.0	18.0	108.0	108.0	54.5	37.5
DN50	PN63	B1	81.0	180.0	135.0	22.0	108.0	108.0	54.5	37.5
DN50	PN100	B1	81.0	195.0	145.0	26.0	108.0	108.0	54.5	37.5

All dimensions in mm

Note: size b & H are based on 1/2" NPT flush connection

DRAWING AND DIMENSIONS RJF FACING



ASME B16.5 - RJF FACING

size	rating	facing	dD	D	K	C1	H	d	d5	b	P	E	F	R
1.5"	cl. 300	RJF	81.0	155.0	114.3	22.2	114.4	108.0	40.9	43.9	68.3	6.4	8.7	0.8
1.5"	cl. 400-600	RJF	81.0	155.0	114.3	22.2	114.4	108.0	40.9	43.9	68.3	6.4	8.7	0.8
2"	cl. 300	RJF	81.0	165.0	127.0	19.5	115.9	108.0	52.5	45.4	82.6	7.9	11.9	0.8
2"	cl. 400-600	RJF	81.0	165.0	127.0	19.5	115.9	108.0	52.5	45.4	82.6	7.9	11.9	0.8

All dimensions in mm



Holland – United Kingdom – Romania – India – Thailand – Dubai – USA

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