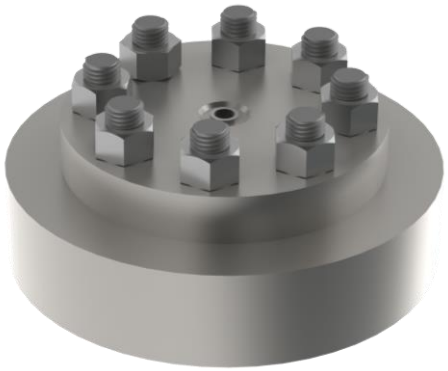
BADOTHERM®

II – DATA SHEET

USLF 1500# – INTERNAL DIAPHRAGM, FLANGED TYPE

The USLF cl.1500# construction is designed for those applications where the existing process connection is too small to use a flush diaphragm seal. The USLF consists of an upper and lower housing, the upper is the actual seal part with a diaphragm size that allows for measurement of low ranges (10 mbar 2 seals attached (dP); 80 mbar single seal attached). The lower housing creates the transition from the diaphragm size to the smaller process connection. USLF is typically used in combination with (differential) pressure transmitters for applications such as level, flow and (absolute) pressure measurement.



STANDARD EXECUTION

DIAPHRAGM	BODY	MOUNTING CONNECTION
AISI 316(L)	AISI 316(L)	top (axial)

FACING	FACING TYPE	GASKET	BOLTS
RF	B1	Virgin PTFE	5/8 UNC B8M-cl2

FLANGED PROCESS CONNECTIONS

ASME B16.5

size	rating	dD
1/2"	cl. 900 – cl. 1500	81.0mm
3/4"	cl. 900 – cl. 1500	81.0mm
1"	cl. 900 – cl. 1500	81.0mm
1,5"	cl. 900 – cl. 1500	81.0mm
2"	cl. 900 – cl. 1500	81.0mm

EN 1092-1

size	rating	dD
DN15	PN160 – PN250	81.0mm
DN25	PN160 – PN250	81.0mm
DN40	PN160 – PN250	81.0mm
DN50	PN160 – PN250	81.0mm

UPPER AND LOWER PART ASSEMBLY

BOLTING

thread	material	mwp	pcs	rating (ASME)	rating (EN)
5/8" UNC	B8M-cl2	250 bar	8	cl. 900 – cl. 1500	PN160 – PN250

GASKET

material	operating temperature
Camprofile	-200 /+ 500°C

Note: mwp (maximum working pressure) at 20 °C with AISI 316(L) body material

WETTED PARTS, BODY MATERIALS, AND FACING OPTIONS

upper part material	lower part material	diaphragm material
AISI 316(L)	AISI 316(L)	AISI 316(L) AISI 304(L) AISI 316 UG AISI 321 Hastelloy C-276
AISI 316(L)	AISI 310 MoLn	25-22-2 LMN
AISI 316(L)	Duplex F44	254 SMO (6Mo)
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)	Hastelloy B2	Hastelloy B2
AISI 316(L)	Hastelloy C-276	Hastelloy C-276
AISI 316(L)	Alloy 20	Alloy 20
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
AISI 316(L)	Tantalum[1]	Tantalum
Titanium Gr.2	Titanium Gr.2	Titanium Gr.1

[1] material AISI 316(L) with Tantaline treatment

facing (ASME B16.5)	
RF	Ra 3.2-6.3 µm
RJF	Ra <1.6 µm
LMF	Ra 3.2-6.3 µm
SMF	Ra <3.2 µm
FF	Ra 3.2-6.3 µm
LTF	Ra <3.2 µm
STF	Ra <3.2 µm
LGF	Ra <3.2 µm
SGF	Ra <3.2 µm
LFF	Ra 3.2-6.3 µm
SFF	Ra <3.2 µm

facing type (EN 1092-1)	
B1	Ra 3.2-12.5 µm
A	Ra 3.2-12.5 µm
B2	Ra 0.8-3.2 µm
C	Ra 0.8-3.2 µm
D	Ra 0.8-3.2 µm
E	Ra 3.2-12.5 µm
F	Ra 3.2-12.5 µm
G	Ra 0.8-3.2 µm
H	Ra 0.8-3.2 µm

COATING AND OTHER OPTIONS

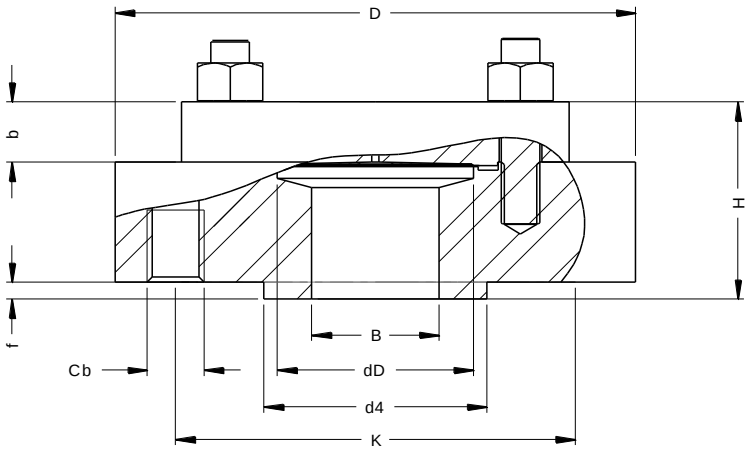
COATINGS

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

OTHER OPTIONS

- heavy duty capillary tube
- TR - temperature reducer
- TC - temperature compensator
- PTFE sheet for anti-stick purpose only (no vacuum)
- 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	B	b	D	d4	f	H	K	Cb / pcs
1/2"	900 – 1500#	RF	81.0	15.8	25.0	160.0	34.9	7.0	75.0	82.6	4 x 3/4"– 10UNC
3/4"	900 – 1500#	RF	81.0	21.0	25.0	160.0	42.9	7.0	75.0	88.9	4 x 3/4"– 10UNC
1"	900 – 1500#	RF	81.0	26.6	25.0	160.0	50.8	7.0	80.0	101.6	4 x 7/8"– 9UNC
1,5"	900 – 1500#	RF	81.0	40.9	25.0	180.0	73.0	7.0	80.0	123.8	4 x 1" – 12UNC
2"	900 – 1500#	RF	81.0	52.5	25.0	215.0	92.1	7.0	82.0	165.1	8 x 7/8"– 9UNC

All dimensions in mm

EN 1092-1 - TYPE B1

size	rating	type	dD	B	b	D	d4	f	H	K	Cb / pcs
DN15	PN160	B1	81.0	17.3	25.0	160.0	45.0	2.0	65.0	75.0	4 x M12
DN15	PN250	B1	81.0	17.3	25.0	160.0	45.0	2.0	67.0	90.0	4 x M16
DN25	PN160	B1	81.0	28.5	25.0	160.0	68.0	2.0	69.0	100.0	4 x M16
DN25	PN250	B1	81.0	28.5	25.0	160.0	66.0	2.0	69.0	105.0	4 x M20
DN40	PN160	B1	81.0	42.5	25.0	170.0	88.0	3.0	68.0	125.0	4 x M20
DN40	PN250	B1	81.0	42.5	25.0	185.0	88.0	3.0	68.0	135.0	4 x M24
DN50	PN160	B1	81.0	54.5	25.0	195.0	102.0	3.0	68.0	145.0	4 x M24
DN50	PN250	B1	81.0	54.5	25.0	200.0	102.0	3.0	73.0	150.0	8 x M24

All dimensions in mm