

The FSO-EXT is typically used in combination with (differential) pressure transmitters for level, flow and pressure measurement, in those applications where the diaphragm need to be flush with the vessel wall or where insulation layers need to be passed. The FSO-EXT is recommended when extended seals are required fully in exotic materials and/or when special grade cover flanges are required for pressure temperature rating. The FSO-EXT lens type seal has a screwed connection into the flange. The seal body is made of bar stock or forged material. Its pressure rating is defined by the back-up flange and as such it can be used for pressure ratings in RF or type B1 facings.



This design is often used in UREA and fertilizer industry, as it is a typically design of the main contractors.

STANDARD EXECUTION

DIAPHRAGM	BODY	MOUNTING CONNECTION	FLANGE
AISI 316L	AISI 316(L)	top	A105

FLANGED PROCESS CONNECTIONS
AVAILABLE SIZES

size	rating	dD
2"	acc. specification	32mm
3"	acc. specification	44mm
4"	acc. specification	72mm

WETTED PARTS, BODY MATERIALS, AND FLANGE MATERIAL

diaphragm material	body material	flange material	threads	norm
AISI 316(L)	AISI 316(L)	A105	NPT	ANSI B1.20.1
AISI 316 UG	AISI 316 UG	A182 AISI 316(L)	METRIC	ISO 965
25-22-2 LMN	25-22-2 LMN			
Duplex 2205	Duplex 2205			
Super Duplex 2507	Super Duplex 2507			
Zirconium Zr 702	Zirconium Zr 702			

DESIGN CONDITIONS AND REMARKS
DESIGN CONDITIONS

- design conditions are according specification unless materials used are not mentioned in spec no:
 - 8486-30-E-SDP-001 (UreaCasale)
 - STD.TB.HPU.5002 (Snamprogetti)

OTHER REMARKS

- lens gasket and stud bolts are excluded from supply
- extension length and diameter of the seal part may be varied upon order
- marking is according specification and contains:
 - size / material / heat no / BDT reference

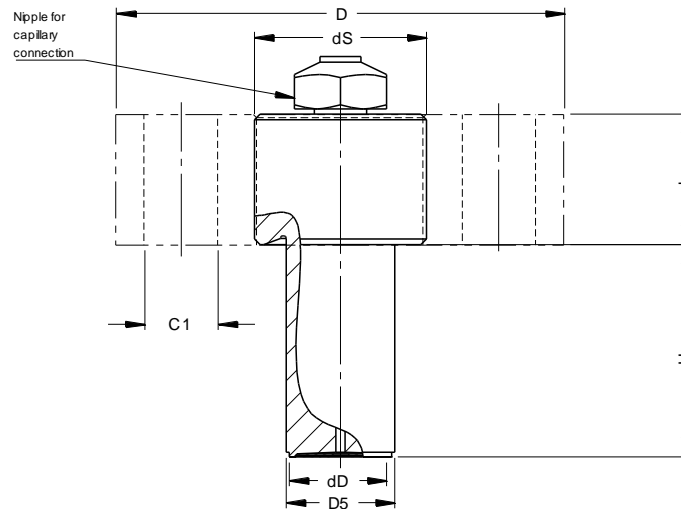
COATING AND OTHER OPTIONS
COATINGS

- gold: 25 µm / 40 µm hydrogen permeation protection

OTHER OPTIONS

- heavy duty capillary tube
- customized length and diameter
- degreased wetted parts
- ASTM A262 - Practice C (Huey Test) - Nitric Acid
- Cyclic Pressure Test
- NDE testing on request (PMI, pressure test, etc.)

DRAWING AND DIMENSIONS STANDARD EXECUTIONS



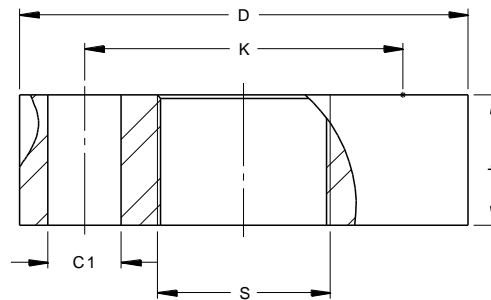
SEAL

size	facing	dD	ds	D5	D	C1	He
2"	lens seat	32	2" NPSM	37.5	155.0	4 x 25.4	various
3"	lens seat	44	3" NPSM	57.0	200.0	8 x 25.4	various
4"	lens seat	72	4" NPSM	76.0	250.0	8 x 31.8	various
2"	lens seat	32	M65x2	38.0	155.0	8 x 25	various
3"	lens seat	44	M100x3	58.0	200.0	8 x 32	various
4"	lens seat	72	M125x4	82.0	250.0	8 x 35	various

All dimensions in mm

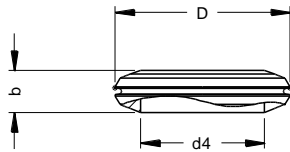
*D, K, b and C1 describe properties of cover flange

Nipple only used with Zirconium 702 material



COVER FLANGE

size	b	D	K	S	C1	stud bolt	spec. no.
2"	45.0	155.0	110.0	2" NPSM	4 x 25.4	4 x 7/8"- 9 UNC x 160mm	STD.TB.HPU.5002/sh10
3"	60.0	200.0	145.0	3" NPSM	8 x 25.4	8 x 7/8"- 9 UNC x 190mm	STD.TB.HPU.5002/sh10
4"	75.0	250.0	185.0	4" NPSM	8 x 31.8	8 x 1 1/8"- 8 UNC x 235mm	STD.TB.HPU.5002/sh10
2"	46.0	216.0	165.0	M65x2	8 x 25	8 x 7/8"- 9 UNC x 180mm	8486-10-SDP-00#/sh3
3"	62.0	267.0	203.0	M100x3	8 x 32	8 x 1 1/8"- 8 UNC x 230mm	8486-10-SDP-00#/sh3
4"	70.0	311.0	241.5	M125x4	8 x 35	8 x 1 1/4"- 8 UNC x 285mm	8486-10-SDP-00#/sh3



LENS GASKET

size	b	D	d4	spec. no.
2"	11.0	56.0	39.3	STD.TB.HPU.5002/sh13
3"	14.0	83.0	58.4	STD.TB.HPU.5002/sh13
4"	18.0	108.0	77.2	STD.TB.HPU.5002/sh13
2"	14.5	61.0	42.9	8486-10-SDP-001/sh3
3"	20.0	95.0	66.6	8486-10-SDP-001/sh3
4"	23.5	118.0	87.2	8486-10-SDP-001/sh3

Note: Lens gasket and stud bolts are excluded from supply



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

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