

A quality conscious organization



ISO 9001
Quality
ISO 14001
Environment
OHSAS 18001
Working environment



Headquarters

Huhnseal AB

Visiting address:

Järvgatan 1 - 261 44 Landskrona - Sweden

Delivery address:

Box 288 - 261 23 Landskrona - Sweden

Tel: +46 418 44 99 40 - Fax: +46 418 44 99 69

sales@huhnseal.com

www.huhnseal.com

a member of



Meccanotecnica
Umbra
a Story of Excellence

join us:



stamp

ITALY

Huhnseal / Meccanotecnica Umbra S.p.A.

Via G. Agnelli, 7
06042 Campello sul Clitunno (PG) ITALY
Phone: +39 331 6870228
Fax: +39 0743 279.242
sales.italy@huhnseal.com

CHINA

Huhnseal / Meccanotecnica Umbra (Qing dao)

North of No 8 road ,jiao zhou wan
industrial park, jiao zhou ,Qing dao, PRC
Phone: +86 138 64289 712
Fax: +86 531 86057 318
sales.china@huhnseal.com

BRAZIL

Huhnseal / Mecanotécnica do Brasil Ltda
R. João Maria Goes, 399
83060-206 São José dos Pinhais - PR - Brasil
Phone: +55 41 9943 5559
Fax: +55 41 3381 2621
sales.brazil@huhnseal.com

INDIA

Huhnseal / Meccanotecnica India Pvt.Ltd.
351, Sr. No. 28/3/1, Ambegaon Kh.,
Near Jambulwadi Lake, Pune 411 046
Phone: +91 020 67919600
sales.india@huhnseal.com

USA

Huhnseal / Meccanotecnica USA Inc.
41650 Gardenbrook Rd.
Suite 110 - Novi, MI 48375
Phone: +1 (248) 347-0606
Mobile: +1 (256) 731-0381
sales.usa@huhnseal.com

E series

Mechanical Seals designed
for the process industry

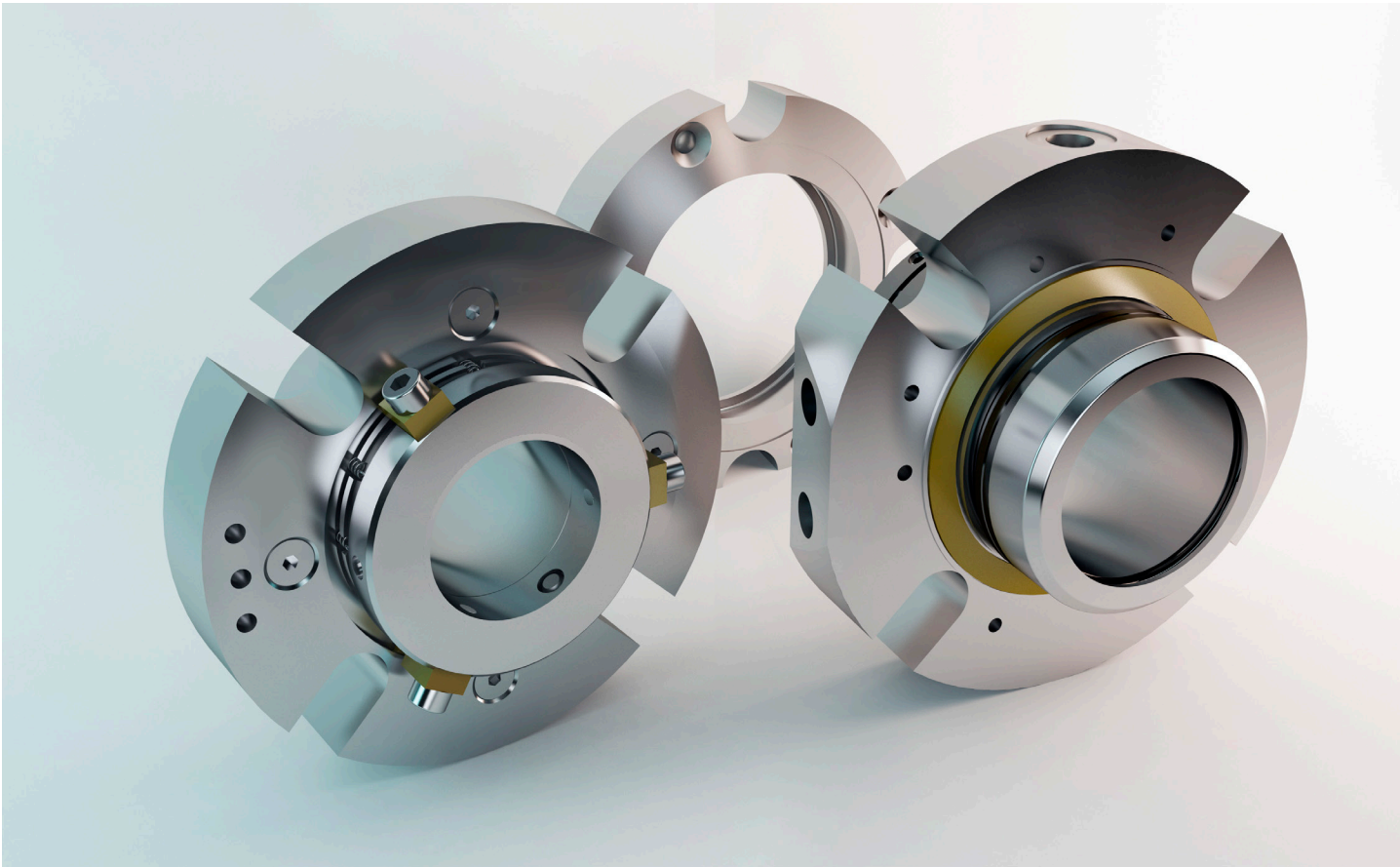


Made in Sweden

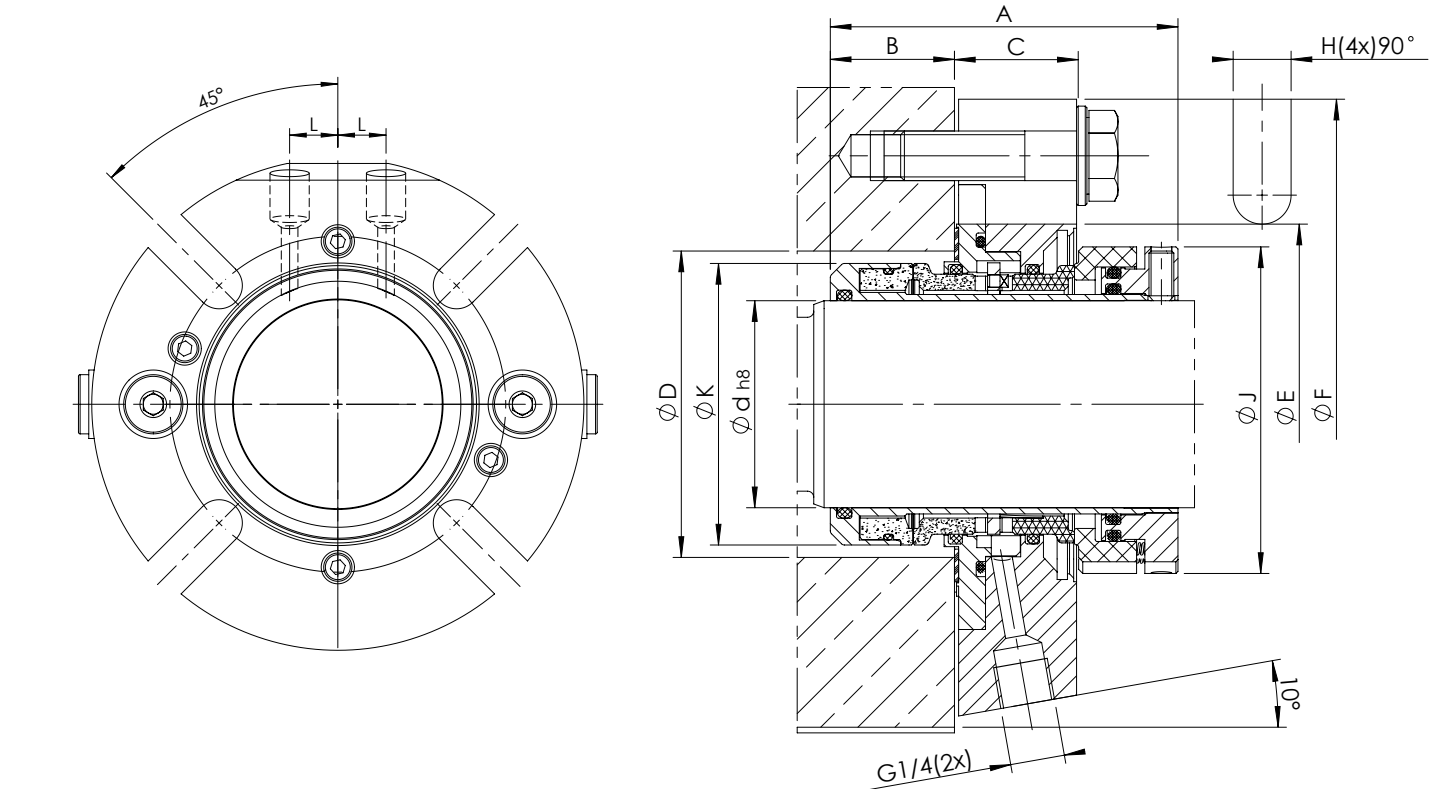


HUHNSEAL

- Excellent axial and radial flexibility
- Suitable for standardizing
- Spring packages isolated from product and buffer fluid
- Easy to install
- Radial and axial cooling channels
- Available in both metric and imperial sizes to suit ANSI pumps with large bores



The E-series are seal solutions designed for use in pumps, agitators and other rotating equipment within process industries such as pulp and paper, petrochemical, food and beverage, and power generation. The E-series offers high-quality and cost-effective seals with optimized built-in dimensions, which makes it an excellent choice for standardization. The E-series has been designed focusing on increased flexibility, optimal performance and reliability as well as easy handling. E-series seals are easy to refurbish, can be configured in many material combinations and can have dimensions customized if required. Available versions of the “E” series for hygienic applications are in accordance with EHEDG and 3A.



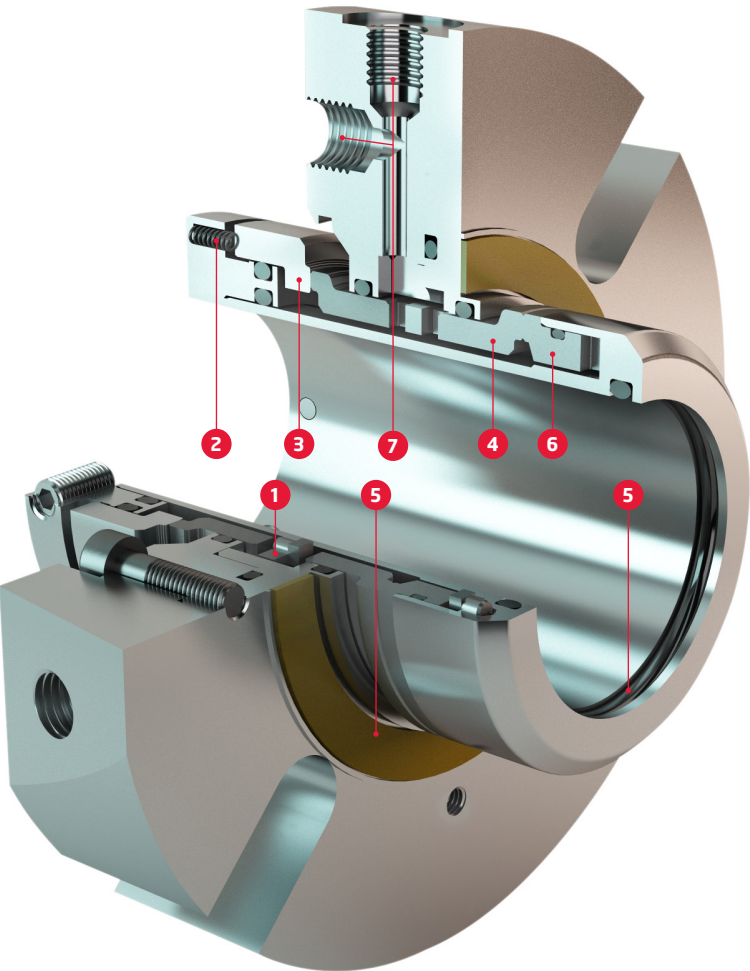
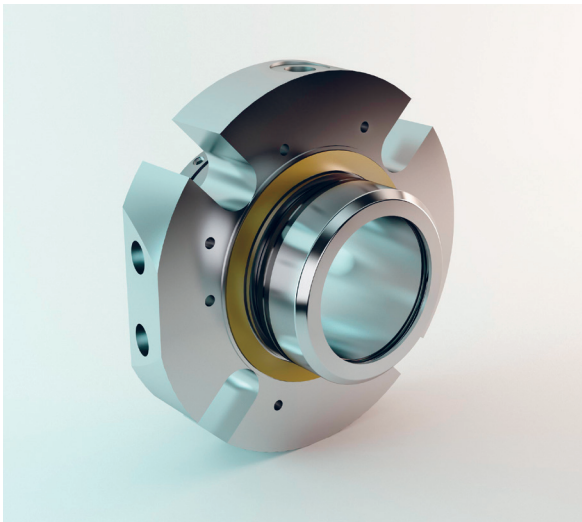
d	A	B	C	D	D min.	D max.	E	F	H	J	K
0,875"	66	30	22	49	44	54	62	105	14	52	43
1"	66	30	22	49	44	54	62	105	14	52	43
1,125"	66	30	22	52	47	57	65	105	14	55	46
1,125" OS	66	30	22	75	47	75	83	114	14	55	46
1,25"	66	30	22	56	51	61	70	110	14	59	50
1,375"	66	30	22	59	54	64	72	112	14	62	53
1,375" OS	66	30	22	77	54	77	87	137	14	62	53
1,5"	66	30	22	62	57	67	75	122	14	65	56
1,625"	66	30	22	67	62	72	80	132	14	70	61
1,75"	66	30	22	70	64	74	82	138	14	72	63
1,75" OS	66	30	22	100	64	100	129	169	14	72	63
1,875"	66	30	22	72	67	77	85	138	14	75	66
1,875" OS	66	30	22	97	67	97	126	165	14	75	66
2"	66	30	22	74	69	79	87	148	18	77	68
2" OS	66	30	22	116	69	116	142	159	18	77	68
2,125"	66	30	22	79	74	84	93	148	18	82	73
2,125" OS	66	30	22	108	74	108	137	182	18	82	73
2,25"	66	30	22	85,5	79	92	102	157	18	87	78
2,25" OS	66	30	22	112	79	112	141	163	18	87	78
2,375"	66	30	22	85,5	79	92	102	157	18	87	78
2,5"	66	30	22	91,5	84	99	109	163	18	92	83
2,5" OS	66	30	22	124	84	124	152	203	18	92	83
2,625"	66	30	22	98,5	89	108	118	178	18	97	88
2,625" OS	66	30	22	124	89	124	152	203	18	97	88
2,75"	66	30	22	98,5	89	108	118	178	18	97	88
2,75" OS	66	30	22	124	89	124	154	203	18	97	88
2,875"	75	35,5	25	109,5	101	118	129	190	18	108	100
3"	75	35,5	25	109,5	101	118	129	190	18	108	100
3" OS	75	35,5	25	140	101	140	168	209	18	108	100
3,125"	75	35,5	25	115	106	124	135	194	18	113	105
3,25"	75	35,5	25	119,5	111	128	139	198	22	118	110
3,375"	75	35,5	25	119,5	111	135	139	198	22	118	110
3,5"	75	35,5	25	125,5	116	135	145	204	22	123	115
3,625"	75	35,5	25	129,5	121	138	148	208	22	128	120
3,75"	75	35,5	25	129,5	121	138	148	208	22	128	120
3,875"	75	35,5	25	135	126	144	154	218	22	133	125
4"	75	35,5	25	135	126	154	154	218	22	133	125

ED

Double balaced cartridge seal

Huhnseal ED is a double balanced cartridge seal maintaining sealing performance even during sudden pressure drops on the product side and/or the secondary side. The design of the seal is robust and rigid but at the same time flexible, with excellent radial and axial movement capabilities. The springs are located outside both the product and the flush minimizing risk for clogging.

Max inside flush pressure = 12 bar
Pmax = 25 barg
Tmax = 200°C
Vmax = 18 m/s (3600 rpm)
Axial movement: ±2,0 mm



- 1

Excellent axial movement

The seal can move ± 2,0 mm independent of the compression of the springs. The seal follows the movement of the shaft without influencing the compression of the springs. This feature is essential when sealing equipment with flexible bearing units.
- 2

Patented protected spring package

The springs are located outside both the product and the flush. Minimizing the risk for clogging, which is one of the most common causes for seal failure. Patent No: 900912-2
- 3

Safe drive of rotating surface at the atmospheric side

The rotating face on the atmospheric side is driven by three big drive pins machined into the sealing face. The pins are not in contact with the quench liquid, eliminating the risk of them being blocked axially by residues from the quench.
- 4

Excellent radial movement capabilities

Through a new design the seal is able to compensate for angular deviation without generating stresses over the seal faces, which may influence sealing performance. This feature minimizes the effects of excessive shaft bending during operation against closed valves.
- 5

Hygienic applications

Smooth surfaces without cavities or closed spaces make the seal suitable for food and drug applications. If required, the gasket may be replaced with O-rings according to EHEDG in order to achieve a hygienic designed seal suitable for CIP (Cleaning in Place).
- 6

H4 design

The rotating sealing face on the product side has the new "H4-design". This means that the seal face is O-ring mounted and the outer diameter of the seal face is the same as of the holder. This prevents the forming of turbulent flows, which cause heavy wear in abrasive liquids.
- 7

Axial cooling channels

Allow for installation of a double seal in applications with very limited space.

- Features
- Cartridge mounted for easy assembly

● Balanced (ES) and double balanced (ED) design for minimum heat generation

● Both ES and ED have excellent axial and radial movement capabilities

● Suitable for standardization

● Robust construction materials as standard:
Acid resistant stainless steel
Graphite loaded sintered silicon carbide
Peroxide cured FPM for ES
FFPM for ED

● Easy and time efficient to recondition on site when required

● Protected spring package to minimize risk for clogging

● The seals may be equipped with a separate flange for flushing

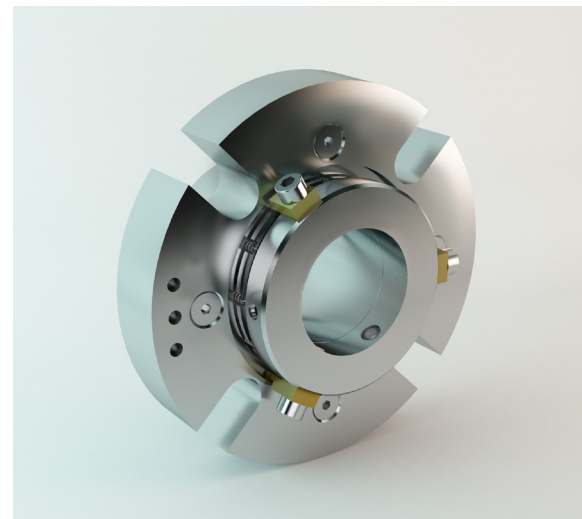
Applications	ED	ES	ESF
Clean fluids*		●	
Fluids with poor lubrication capabilities	●		●
Crystallizing fluids	●		●
Fluids reacting with air	●		
Sedimentary fluids	●		●
High temperature fluids (>100°C)	●		●
Fluids hazardous to health and enviroment	●		
Extra need of cooling / pressure balancing			●

*Clean fluids: Low content of solid and abrasive particed. For example, less than 3% fiber content in Pulp & Paper.

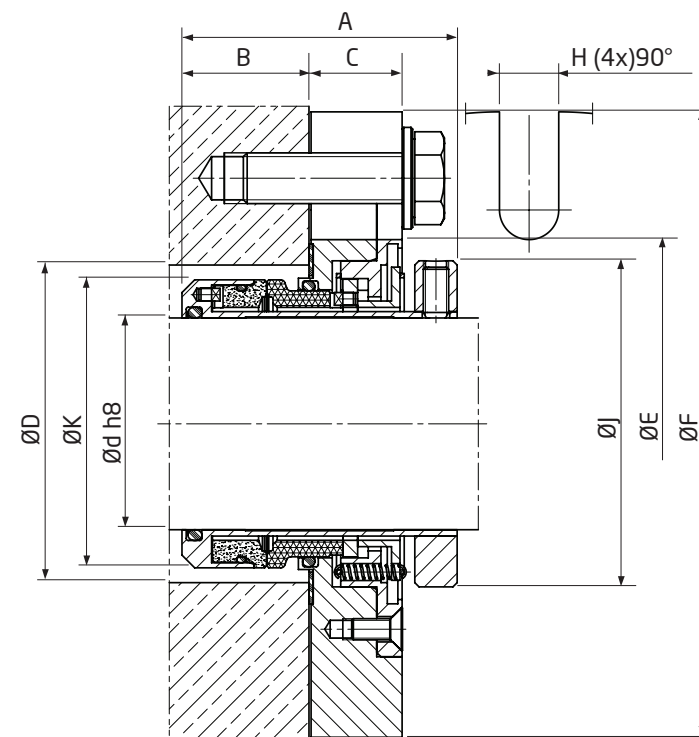
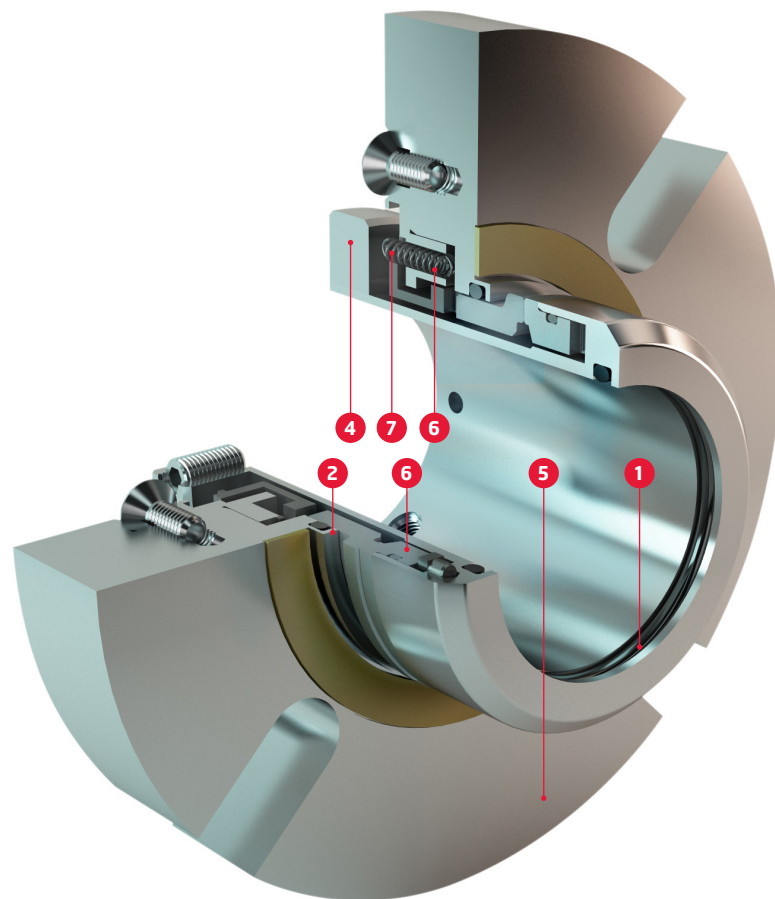
Materials	Standard	On request
Rotating face product side	SSiC+C	TC
Stationary face product side	SSiC	TC
Rotating face atmospheric side	TC	-
Stationary face atmospheric side	Carbon	SSiC
Elastomer	EPDM / FPM / FFPM	-
Springs	HASTELLOY C™, EN 1.4401	-
Metal parts	EN 1.4404	Titanium / EN 1.4462

Huhnseal ES is a balanced single mechanical seal with a unique and modern design. The springs are not placed directly behind the stationary face, this being the most common competitor solution, but have been located on a larger diameter further away from the critical O-ring and seal face gap in order to reduce risk for clogging. Due to the relocation of the springs, more robust springs may be used enabling to change from compression to tension springs. The robust tension spring design gives the seal better performance since it is more difficult for particles and fibers from the product to reach and clog up the springs. Additionally the relatively long springs with larger wire diameter increase the axial and radial movement capabilities of the seal. First-class materials from carefully selected suppliers ensure optimized performance at minimized built-in dimensions.

*Pmax = 25 barg
Tmax = 100°C
Vmax = 18 m/s (3600 rpm)
Axial movement: ±2,0 mm*

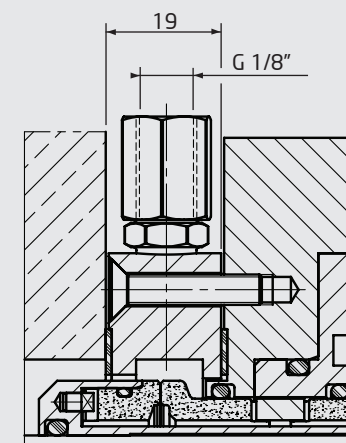


- Hygienic solutions**
Smooth surfaces without cavities or closed spaces make the seal suitable for food and drug application. If required the gasket may be replaced with O-rings in execution according to EHEDG to achieve a hygienic designed seal suitable for CIP (Cleaning in Place).
- Excellent angular movement capabilities**
Advantage when operating against closed valves, causing shaft bending.
- H4 design**
The rotating sealing face on the product side has the new "H4-design". This means that the seal is O-ring mounted and the outer diameter of the seal face is the same as of the holder. This prevents the forming of turbulent flows, which cause heavy wear in abrasive liquids.
- Advantageous built-in dimensions**
Fits in most standard pump stuffing boxes.
- Optional additional flange for flushing**
The seal may be equipped with an extra flange when flushing into the media is needed. The standard design is without flange since the chamber with a small gap given by the flushing flange may encourage material build-up if flush is not connected.
- Spring package located on the outside of the flange**
This design is better protected against fiber and particle build-up, which eventually causes clogged-up springs.
- Patented tension springs**
Allow for an excellent axial movement of ± 2,0 mm.
Patent No: 9803436-6



ESF - Single Seal with optional Flushing Flange

Depending on the application, the seals may be equipped with an additional flange in order to achieve balanced pressure, flushing and/or additional cooling. This will increase the lifetime of the seal.



The axial built-in measurement increases with 19 mm irrespective of the shaft dimension.

d	A	B	C	D min.	D max.	E	L	F	J	H	K
1"	84	30	29,5	44	54	62	21	105	51	14	43
1,125"	84	30	29,5	47	57	65	21	105	54	14	46
1,125" OS	84	30	29,5	47	75	83	21	114	54	14	46
1,25"	84	30	29,5	51	61	70	23	110	58	14	50
1,375"	84	30	29,5	54	64	72	24	112	61	14	53
1,375" OS	84	30	29,5	54	77	87	24	137	61	14	53
1,5"	84	30	29,5	57	67	75	25	122	64	14	56
1,625"	84	30	29,5	62	72	80	26	132	69	14	61
1,75"	84	30	29,5	64	74	82	27	138	71	14	63
1,75" OS	84	30	29,5	64	100	115	27	169	71	14	63
1,875"	84	30	29,5	67	77	85	27	138	74	14	66
1,875" OS	84	30	29,5	67	97	112	27	165	74	14	66
2"	84	30	29,5	69	79	87	29	148	76	18	68
2" OS	84	30	29,5	69	116	124	29	159	76	18	68
2,125"	84	30	29,5	74	84	93	31	148	81	18	73
2,125" OS	84	30	29,5	74	108	119	31	182	81	18	73
2,25"	84	30	29,5	79	92	102	33	157	86	18	78
2,25" OS	84	30	29,5	79	112	123	33	163	86	18	78
2,375"	84	30	29,5	79	92	102	33	157	86	18	78
2,5"	84	30	29,5	84	99	109	35	163	91	18	83
2,5" OS	84	30	29,5	84	124	134	35	203	91	18	83
2,625"	84	30	29,5	89	108	118	37	178	96	18	88
2,625" OS	84	30	29,5	89	124	134	37	203	96	18	88
2,75"	84	30	29,5	89	108	118	37	178	96	18	88
2,75" OS	84	30	29,5	89	124	136	37	203	96	18	88
2,875"	100	35,5	31,5	101	118	129	41	190	110	18	100
3"	100	35,5	31,5	101	118	129	41	190	110	18	100
3" OS	100	35,5	31,5	101	140	150	41	209	110	18	100
3,125"	100	35,5	31,5	106	124	135	43	194	115	18	105
3,25"	100	35,5	31,5	111	128	139	45	198	120	22	110
3,375"	100	35,5	31,5	111	128	139	45	198	120	22	110
3,5"	100	35,5	31,5	116	135	145	47	204	125	22	115
3,625"	100	35,5	31,5	121	138	148	49	208	130	22	120
3,75"	86	21,5	31,5	121	138	148	49	208	130	22	88
3,875"	100	35,5	31,5	126	144	154	50	218	135	22	125
4"	100	35,5	31,5	126	144	154	50	218	135	22	125