

# BDTP™

## Bellows Double Tandem Pumping



- Tandem bellows cartridge seal
- Integral bi-directional flow inducer
- Directed barrier fluid circulation
- Fits on pumps with thin radial cross sectional spaces (0.312" / 8mm)



# BDTP™ - Better by Design

The BDTP™ is an innovative hybrid design, modular to the highly successful BDFI™.

## Inboard Bellows

The bellows unit is ideally suited to replace the semi-dynamic sliding elastomer of a conventional pusher seal. This allows the bellows design to be more readily applied to thermal applications.

The BDTP™ is available in any AESSEAL® standard metal bellows material and seal face combination including SHS, HHH and SAC with Carbon, Antimony Carbon, TC or SiC seal faces.

## Directed Barrier Fluid Circulation

Removing the heat at the inboard faces is critical for any double mechanical seal, more so on a seal which may be applied to thermal applications. The BDTP™ directed barrier fluid flow path achieves effective heat removal at both sets of seal faces.

## Bi-directional Barrier Fluid Circulation

The BDTP™ will reliably circulate barrier fluid irrespective of the direction of shaft rotation with a Patent Pending pumping ring.

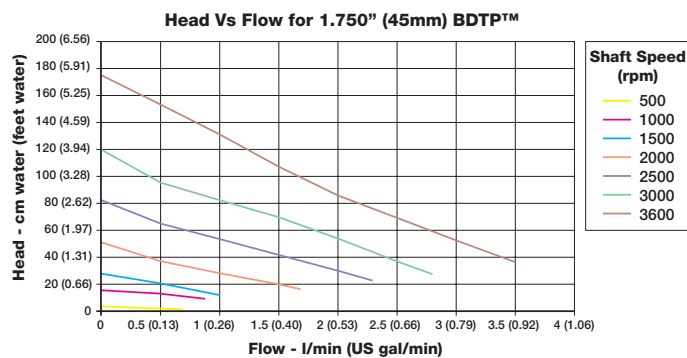
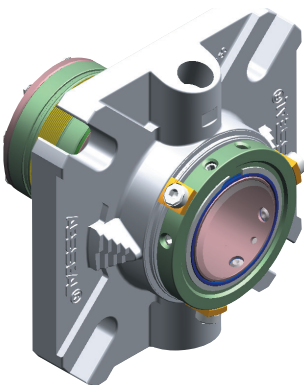
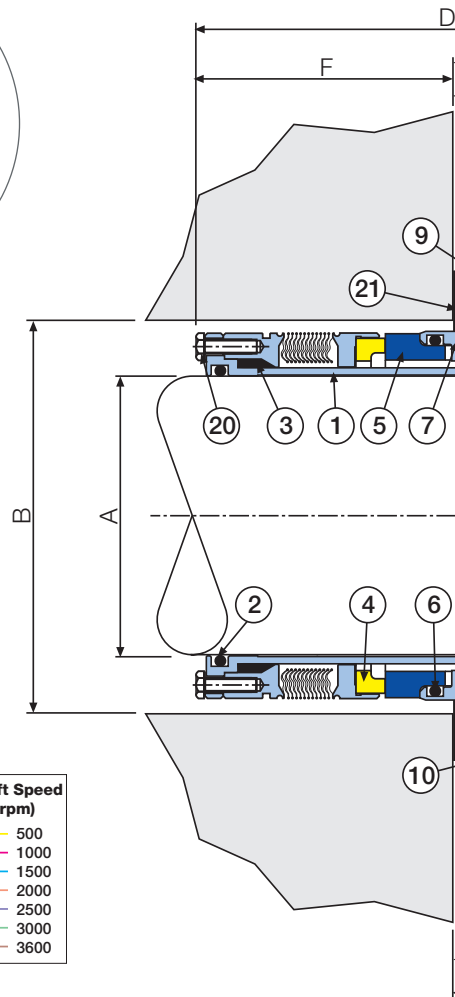
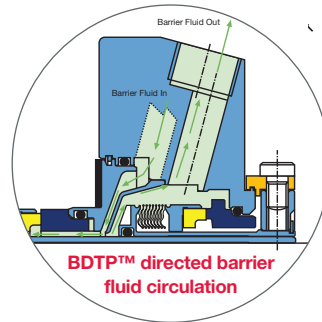
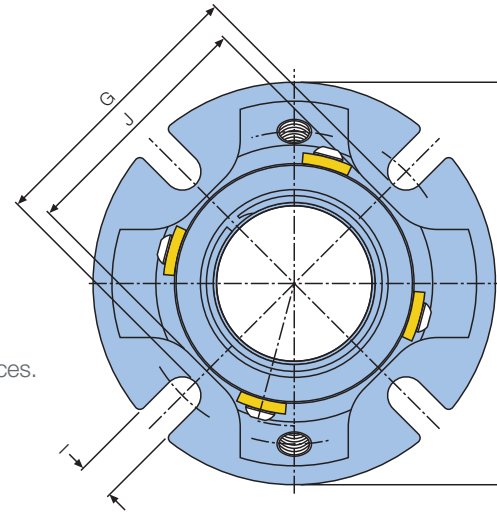
## Fits in Thin Radial Cross Sectional Spaces

The BDTP™ can be installed on equipment with radial cross sectional spaces as small as 0.312" (8mm). This is typical on some smaller sized process pumps.

## Bellows Outboard Rotary Seal face

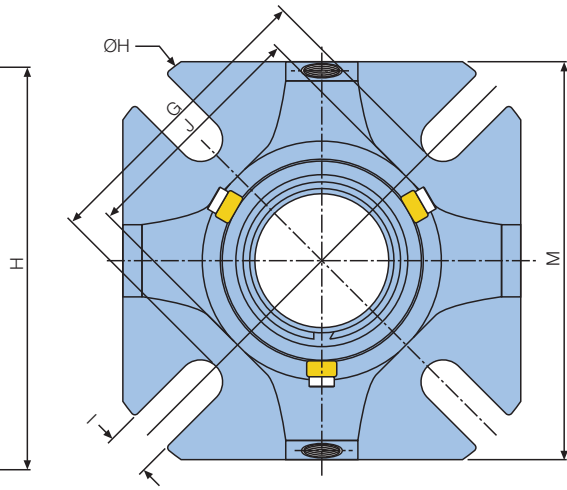
Any seal design applied to thermal applications must have the ability to seal relatively hot barrier fluids without leaking externally.

The Patent Pending outboard rotary seal face is offered as standard with an Alloy C276 Bellows stack and 316L Stainless Steel face holder. As the face holder is a modular component to many other AESSEAL® product ranges it can be offered in Alloy C276 if required.



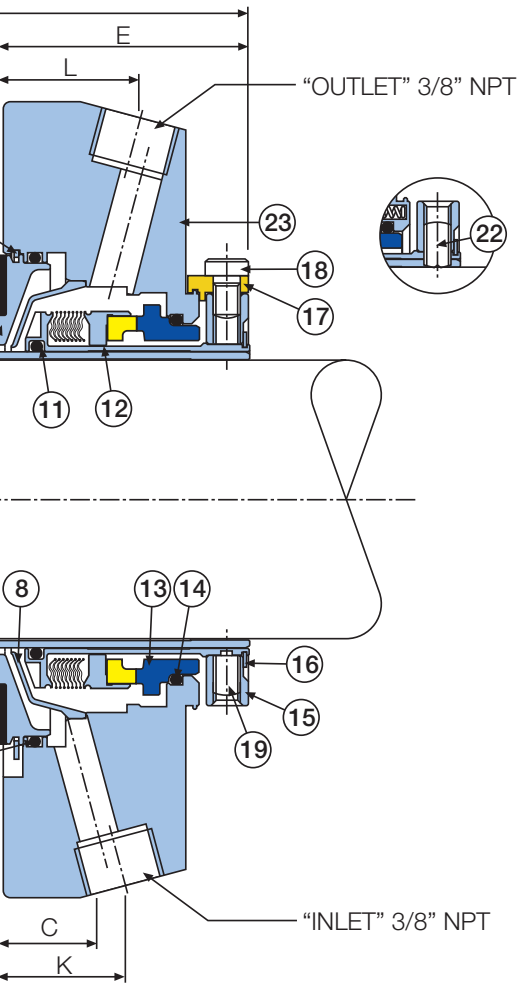
**Standard ISO / ANSI Box Bore 28.0mm - 65mm (1.125" - 2.625")**

A	B	MinB	Max	C	D	E	F	G	H	I	J	K	L
28.0	44.0	52.0	19.1	100.8	52.4	48.4	62.2	111.1	14.0	57.2	20.6	28.6	
35.0	51.0	60.3	19.1	100.8	52.4	48.4	71.8	104.1	11.0	67.0	20.6	28.6	
45.0	63.5	73.0	19.1	106.7	53.1	53.6	83.8	139.1	14.0	75.7	31.5	33.0	
55.0	74.0	90.5	22.2	108.7	53.1	55.6	100.3	150.0	17.5	86.6	25.3	29.0	
60.0	79.4	95.0	19.1	108.7	53.1	55.6	108.7	170.8	17.5	94.4	26.5	29.7	
63.0	85.8	95.0	19.1	114.9	53.1	61.8	108.7	170.8	17.5	94.4	31.5	33.0	
65.0	88.9	98.0	19.1	114.9	53.1	61.8	111.9	180.3	17.5	98.3	31.5	33.0	
1.125	1.750	2.062	0.750	3.970	2.062	1.908	2.449	4.375	0.551	2.250	0.812	1.125	
1.375	2.000	2.375	0.750	3.970	2.062	1.908	2.827	4.100	0.433	2.638	0.812	1.125	
1.750	2.500	2.875	0.750	4.200	2.091	2.109	3.297	5.475	0.551	2.982	1.240	1.299	
1.875	2.625	3.000	0.750	4.200	2.091	2.109	3.450	5.906	0.689	3.108	1.240	1.299	
1.875-D	2.625	2.875	0.800	4.200	2.091	2.109	3.325	4.875	0.472	3.025	1.150	1.150	
2.125	2.875	3.562	0.875	4.280	2.091	2.189	3.950	5.906	0.689	3.408	0.995	1.140	
2.375	3.125	3.750	0.750	4.280	2.091	2.189	4.280	6.725	0.689	3.716	1.043	1.170	
2.500	3.375	3.750	0.750	4.525	2.091	2.437	4.280	6.725	0.689	3.716	1.240	1.299	
2.625	3.500	3.875	0.750	4.525	2.091	2.437	4.405	7.100	0.689	3.871	1.240	1.299	



**Large ISO / ANSI Plus Box Bore**

A	B	MinB	Max	C	D	E	F	G	H	I	J	K	L	M
1.125	1.750	2.750	0.750	3.970	2.062	1.908	3.199	5.000	0.551	2.323	1.125	1.125	3.990	
1.375	2.000	3.062	0.750	3.970	2.062	1.908	3.449	5.375	0.551	2.638	1.125	1.125	4.250	
1.750	3.500	4.000	0.790	4.200	2.000	2.200	4.449	6.750	0.551	3.100	1.087	1.087	5.480	
1.875	3.500	4.000	0.619	4.200	2.000	2.200	4.449	6.750	0.551	3.500	1.087	1.087	5.480	
2.125	3.875	4.187	0.669	4.280	2.000	2.280	4.661	7.600	0.689	3.715	1.125	1.125	6.205	
2.500	4.500	4.812	0.760	4.525	2.091	2.437	5.411	8.225	0.689	4.525	1.231	1.231	6.705	
2.625	4.500	4.812	0.760	4.525	2.091	2.437	5.411	8.225	0.689	4.525	1.093	1.093	6.705	



Item	Description	Material
1	Sleeve	316L Stainless Steel
2	Sleeve 'O' Ring	FKM / EPDM / FFKM / TFE/P
3	Rotary Wedge	Graphite
4	Rotary Bellows Face - SHS	316L SS - Alloy C276 - 316L SS - Carbon / TC / SIC / Antimony Carbon
4	Rotary Bellows Face - SAC	316L SS - AM350 - Alloy 42 - Carbon / TC / SIC / Antimony Carbon
4	Rotary Bellows Face - HHH	Alloy C276 - Alloy C276 - Alloy C276 - Carbon / TC / SIC / Antimony Carbon
5	Stationary Face	SIC / TC
6	Stationary 'O' Ring	FKM / EPDM / FFKM / TFE/P
7	Gland Insert	316L Stainless Steel
8	Deflector	316L Stainless Steel
9	Snap Ring	Stainless Steel
10	Gland Insert 'O' Ring	FKM / EPDM / FFKM / TFE/P
11	Rotary Holder 'O' Ring	FKM / EPDM / FFKM / TFE/P
12	Rotary Face - SHS	316L SS - Alloy C276 - 316L SS - Carbon / TC / SIC / Antimony Carbon
12	Rotary Face - SHS	316L SS - Alloy C276 - 316L SS - Carbon / SIC / TC / Antimony Carbon
13	Stationary Face	SIC / TC
14	Stationary 'O' Ring	FKM / EPDM / FFKM / TFE/P
15	Clamp Ring	316L Stainless Steel
16	Circlip	Stainless Steel
17	Settings Clips	Brass
18	Setting Clip Screws	Stainless Steel
19	Anti Tamper Screws	Stainless Steel
20	Screws	Stainless Steel / Alloy C276
21	Gasket	AF1 / GFT / Graphite
22	Drive Screws	Stainless Steel
23	Gland	316 Stainless Steel

Contact AESSEAL® Technical Department for dimensional information of seal sizes not shown.

**Check availability as only a limited size range is inventoried.**

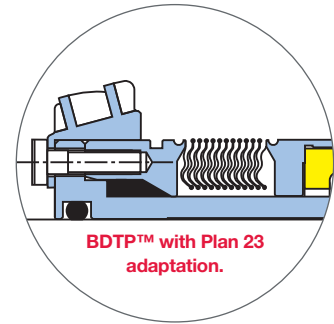
# BDTP™ / BDFI™ - Modularity at it's Best

## Changing the Environment

Often the most successful solution when sealing difficult applications is to change the seal environment.

AESSEAL® widely promote the use of Plan 23 systems, using seals and systems like the SMSS23™ and AESSEAL® Cooler™ range.

The BDTP23™ is a simple and cost-effective solution which also effectively changes the seal environment when used in conjunction with an appropriate adapter plate.



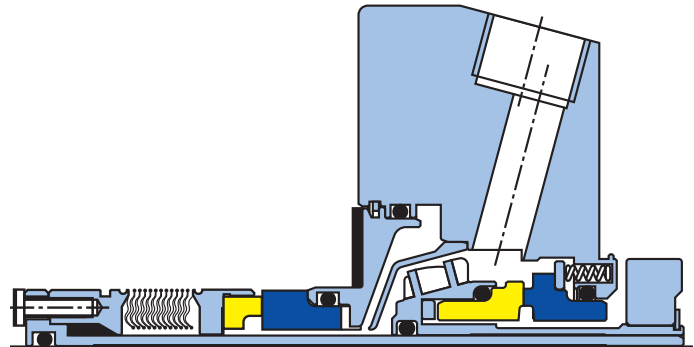
## BDFI™ & BDFC™ Range

Like all AESSEAL® products, modularity is the key to providing service at an affordable price. The BDFI™ and BDFC™ are sister products to the BDTP™.

The BDFI™ / BDFC™ offer the advantage of an inboard metal bellows unit available in any AESSEAL® standard metal bellows material and seal face combinations including SHS, HHH and SAC with Carbon, Antimony Carbon, TC or SiC seal faces.

This inboard bellows design is ideal to replace the semi-dynamic rotary elastomer in some chemical or thermal applications

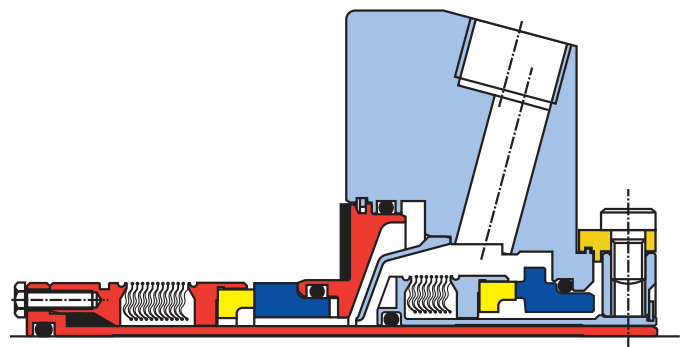
See the BDFI™ / BDFC™ literature for further information.



## Exotic Alloy Wetted Options

The BDTP™ is available with wetted components offered in Alloy 276. **Contact AESSEAL® for availability.**

You can download this document and other information from [www.aesseal.com](http://www.aesseal.com)



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### AESSEAL plc is certified to:

ISO 9001, ISO 14001, ISO/IEC 20000, ISO/IEC 27001,  
ISO/TS 29001, ISO 37001, ISO 45001 & ISO 50001



Net Zero champions globally



Use double mechanical seals with hazardous products.

Always take safety precautions:

- Guard your equipment
- Wear protective clothing



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