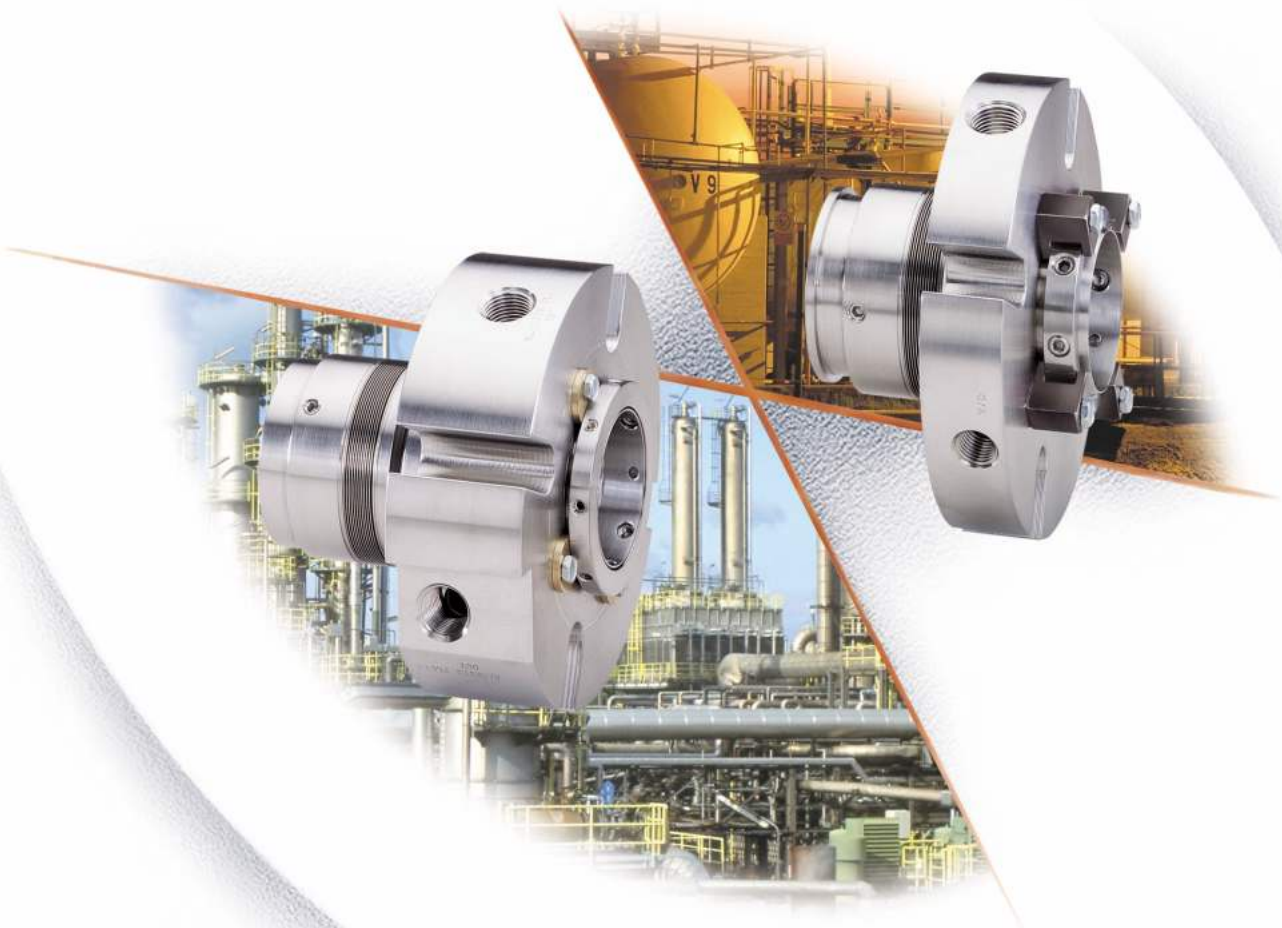




186 Single and 286 Dual Tandem Bellows Cartridge Seals

- High performance bellows technology for enhanced reliability
- Reliable sealing on the most aggressive services
- Easily fits a wide range of pumps and rotating equipment

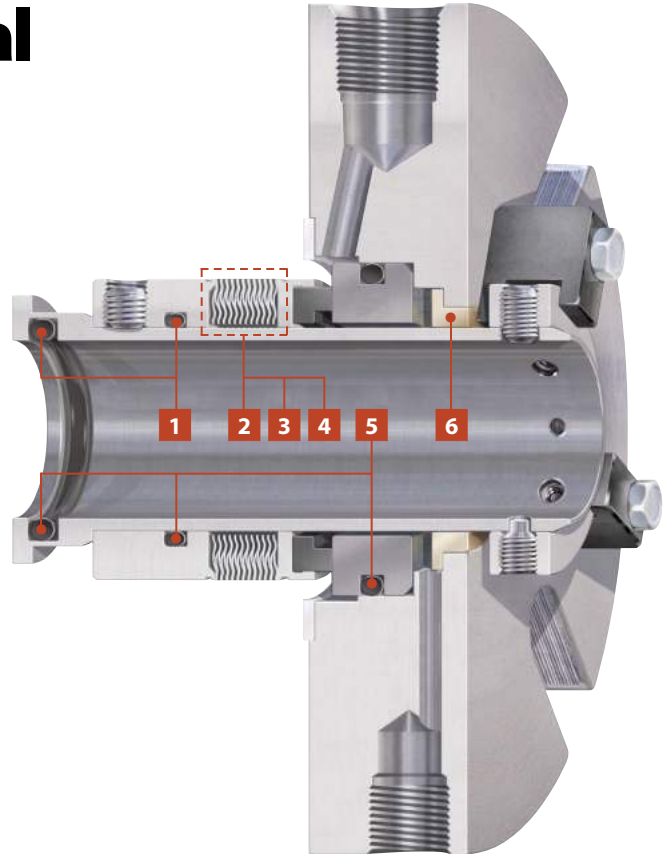


*Achieve high reliability with
Chesterton bellows
technology*

186 Single Bellows Cartridge Seal

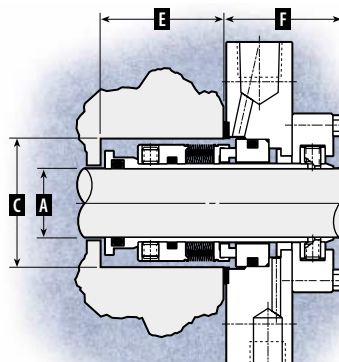
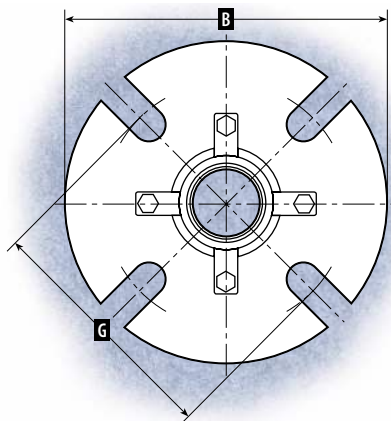
Construction Details

- 1 Static O-rings throughout guarantee non-fretting
- 2 Advanced bellows design for maximum cycle life
- 3 Rotating bellows for enhanced performance on slurry and particulate services
- 4 Hastelloy C** bellows construction for severely corrosive environments
- 5 Elimination of dynamic O-rings allows the use of PTFE encapsulated O-rings to achieve maximum chemical resistance
- 6 Full featured gland uses a close clearance throttle bushing for maximum control during quenching/venting and draining



186 – Dimensional Data/Inch

SHAFT SIZE A	GLAND OD B MAX	STUFFING BOX BORE C		SB DEPTH E MIN	OB LENGTH F	BOLT CIRCLE BY BOLT SIZE		
		MIN	MAX			3/8"	G/MIN 1/2"	5/8"
1.000	4.25	1.75	1.86	1.45	1.79	2.81	-	-
1.125	4.25	1.75	2.11	1.51	1.79	2.90	-	-
1.250	4.25	2.00	2.23	1.63	1.79	3.02	-	-
1.375	4.25	2.00	2.36	1.63	1.79	3.15	-	-
1.500	4.50	2.25	2.61	1.70	1.79	3.39	3.51	-
1.625	5.00	2.38	2.74	1.76	1.79	3.51	3.64	-
1.750	5.50	2.50	2.86	1.82	1.79	3.62	3.75	-
1.875	5.50	2.63	2.98	1.82	1.79	3.75	3.88	-
2.000	5.50	2.75	3.24	1.82	1.85	4.00	4.13	4.25
2.125	6.00	2.88	3.36	1.88	1.85	4.13	4.25	4.38
2.250	6.25	3.00	3.48	1.88	1.91	4.25	4.38	4.50
2.375	6.25	3.25	3.61	1.98	1.91	4.38	4.50	4.63
2.500	6.50	3.38	3.61	2.04	1.98	4.38	4.50	4.63



186 – Specifications

STANDARD MATERIALS*

Rotary Faces:

- Carbon
- Tungsten Carbide

Stationary Faces:

- Silicon Carbide

Major Metal Parts:

- 316SS

End Fittings:

- 316SS

Bellows:

- Hastelloy C**

O-Rings:

- Perfluoroelastomer, Fluorocarbon, AFLAS†, Ethylene Propylene, TJ/FKM

OPERATING LIMITS

Speed Limits:

- To 4000 fpm (20 mps)

Temperature Limits:

- To 300°F (150°C)
Ethylene Propylene, TJ/FKM
- To 400°F (205°C)
Fluorocarbon, AFLAS
Perfluoroelastomer
- Consult Chesterton engineering for higher temperatures

* Other materials available upon request.

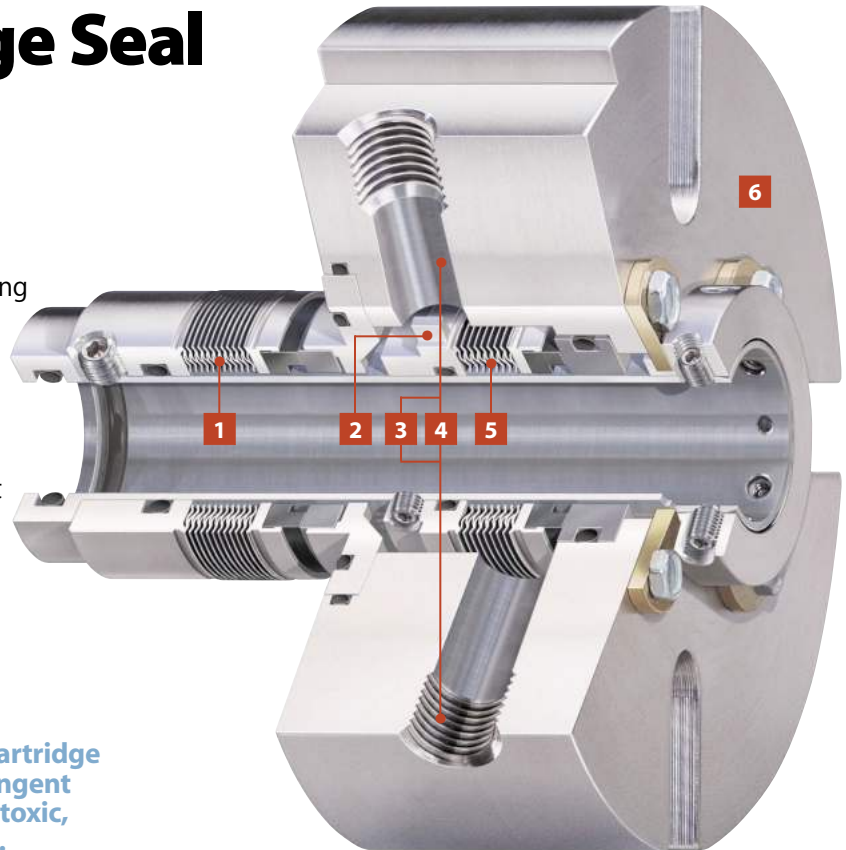
** Haynes International, Inc. Registered Trademark.

† Asahi Glass Company Ltd. Registered Trademark.

286 Dual Tandem Bellows Cartridge Seal

Construction Details

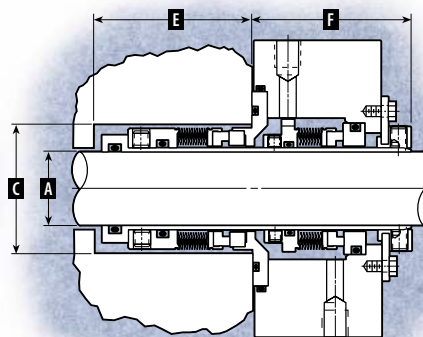
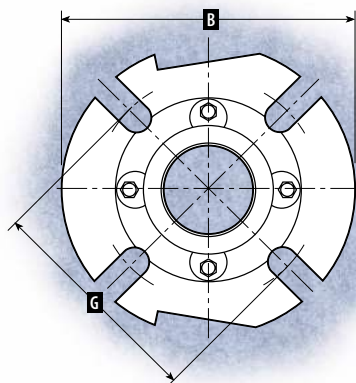
- 1** Rotating bellows enhances performance in particulate services
- 2** High efficiency pumping vanes create a helical flow pattern for ideal internal cooling
- 3** Large diameter barrier fluid inlet and outlet ports for increased flow
- 4** Bi-directional barrier fluid ports allow one seal design to operate on both clockwise and counterclockwise rotating equipment
- 5** Outboard bellows is pressurized on its outside diameter for maximum safety and performance
- 6** Compact design fits in standard pumps and rotating equipment



With the Chesterton 286 Dual Tandem Cartridge Bellows Seal, you can meet the most stringent requirements for sealing emissions, and toxic, carcinogenic and other hazardous fluids.

286 – Dimensional Data/Inch

SHAFT SIZE	GLAND OD	STUFFING BOX BORE		SB DEPTH	OB LENGTH	BOLT CIRCLE BY BOLT SIZE				
		A	B MAX			C MIN	C MAX	E MIN	F	G/MIN
1.000	4.13	1.75	1.88	2.03	2.06	2.90	-	-		
1.125	4.25	1.75	1.88	2.03	2.06	2.90	-	-		
1.250	4.25	2.00	2.13	2.06	2.13	3.02	-	-		
1.375	4.25	2.00	2.19	2.06	2.03	3.25	-	-		
1.500	4.50	2.25	2.38	2.25	2.13	3.50	3.63	-		
1.625	5.00	2.38	2.50	2.21	2.13	3.56	3.69	-		
1.750	5.50	2.50	2.56	2.34	2.13	3.63	3.75	-		
1.875	5.50	2.63	2.69	2.34	2.13	3.75	3.88	-		
2.000	5.50	2.75	2.94	2.34	2.13	4.01	4.13	-		
2.125	6.00	3.00	3.19	2.40	2.13	4.25	4.38	4.50		
2.250	6.25	3.13	3.19	2.40	2.13	4.25	4.38	4.50		
2.375	6.25	3.25	3.44	2.31	2.25	4.38	4.50	4.63		
2.500	6.50	3.38	3.44	2.41	2.19	4.56	4.81	4.81		



286 – Specifications

STANDARD MATERIALS*

Rotary Faces:

- Carbon
- Tungsten Carbide

Stationary Faces:

- Silicon Carbide

Major Metal Parts:

- 316SS/17-4 Ph

End Fittings:

- 316SS

Inboard Bellows:

- Hastelloy C**

Outboard Bellows:

- AM350, Hastelloy C (optional)

O-Rings:

- Fluorocarbon, AFLAS†, Ethylene Propylene, TJ/FKM Perfluoroelastomer

OPERATING LIMITS

Speed Limits:

- To 4000 fpm (20 mps)

Temperature Limits:

- To 300°F (150°C) Ethylene Propylene, TJ/FM
- To 400°F (205°C) Fluorocarbon, AFLAS Perfluoroelastomer
- Consult Chesterton engineering for higher temperatures

* Other materials available upon request.

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† Asahi Glass Company Ltd. Registered Trademark.

186 Single and 286 Dual Tandem Bellows Cartridge Seals

Cartridge Mounted Bellows Makes Installation Fast and Easy

- Installation is reliable.
- No loose parts to damage or misplace.
- Robust glands minimize distortion induced by gland bolt torque.
- Allows for impeller adjustments.
- No engineering, modifications, centering and measuring.

Versatile Performance for a Wide Range of Services

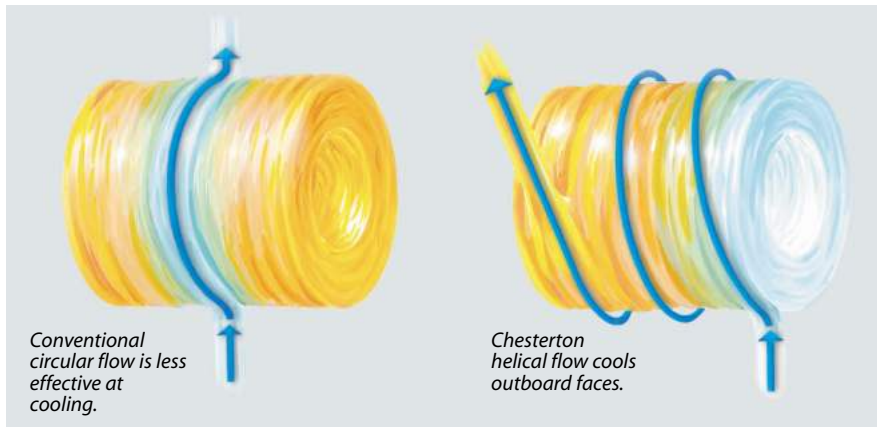
The 286 is designed for use with oil-based or other approved barrier fluids. The inboard seal is double balanced for safe operation with barrier fluid pressure either higher or lower than the stuffing box pressure.

- In tandem mode, the barrier fluid pressure is lower than stuffing box pressure. This prevents contamination of the pumped fluid in the event of inboard seal leakage.



- In double mode, the barrier fluid pressure is higher than stuffing box pressure. This provides the ultimate protection against escape of hazardous fluids or vapors into the atmosphere.

Enhanced Helical Flow For Internal Cooling



The CHESTERTON 286 features an offset entry port, pumping vanes, and tangential exit ports to create a helical flow pattern, distributing cooling barrier fluid over faces. The tangential exit ports prevent turbulence and back pressure,

which can inhibit circulation. There are no "dead zones" of uncirculated fluid to overheat the faces and cause loss of lubrication and the potential for dangerous phase changes.



Contact your local CHESTERTON Sealing Specialist for precise system recommendations

Let us help you identify opportunities for cost-savings and greater efficiency at your plant. Distributors can be found at our distributor locator on our website (www.chesterton.com).