

CHESTERTON®

ISO 9001
CERTIFIED

225™ Cartridge Dual Seal

Patented



The new standard for reliability

Exclusive face design for superior emissions control capability.

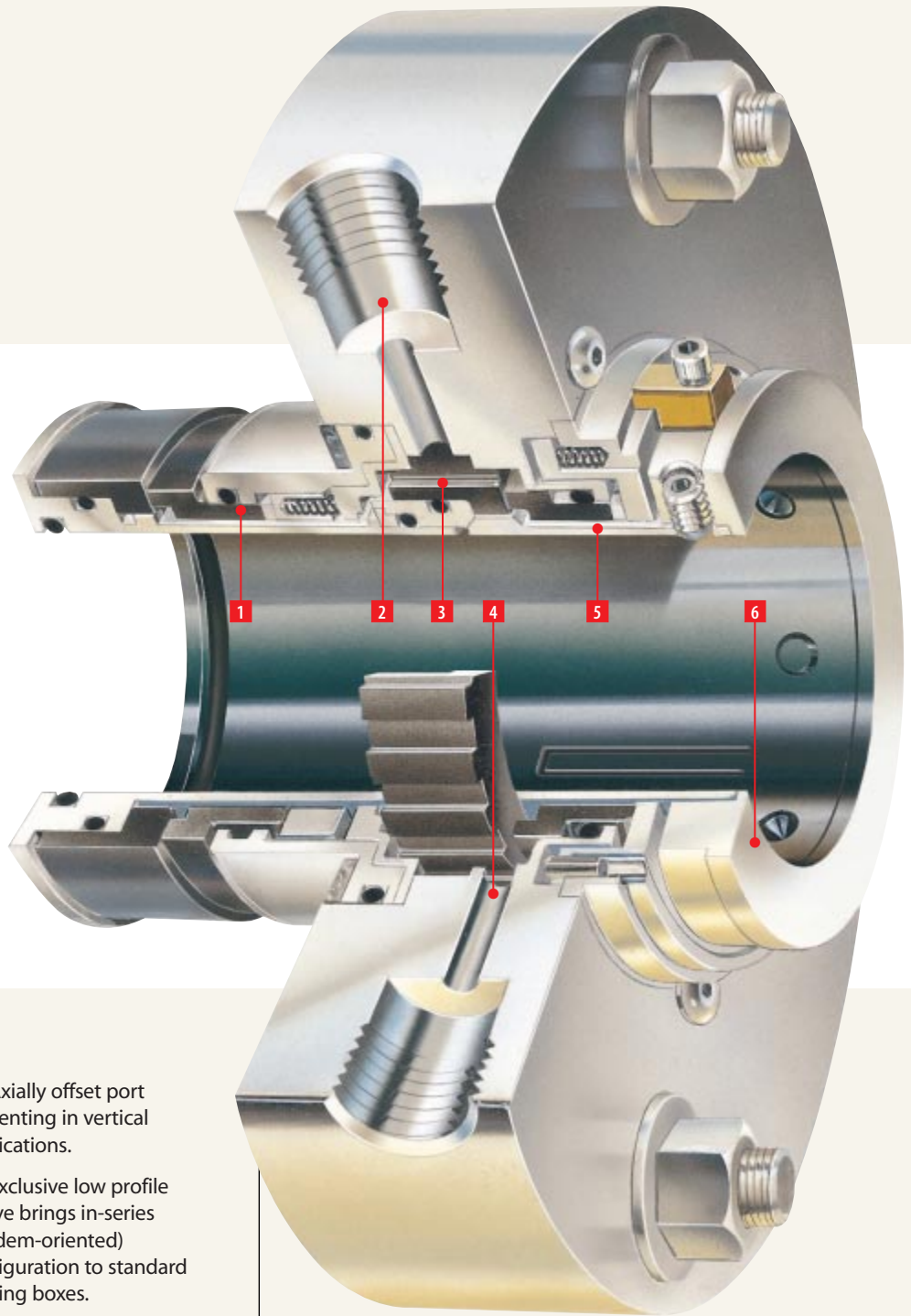
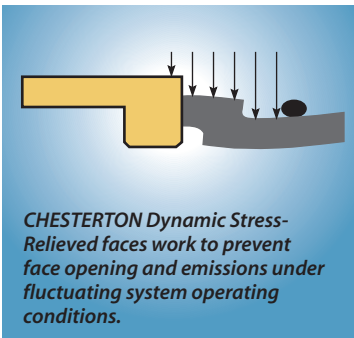
Stable, secure sealing under fluctuating conditions.

Patented features assure precision alignment from start-up.

In-series design for the most demanding applications.

CHESTERTON®

225™ Cartridge Dual Seal



1 Low emissions face design. Narrow contact geometry limits friction by up to 60%. In-series configuration for the most demanding applications.

2 Bi-directional barrier fluid connections for shaft rotation in either direction.

3 Built-in pumping vanes and cutwater in gland for efficient barrier fluid circulation.

4 Axially offset port for venting in vertical applications.

5 Exclusive low profile sleeve brings in-series (tandem-oriented) configuration to standard stuffing boxes.

6 Patented Self-Centering Lock Ring™ squares and aligns faces for superior emissions control from start-up.

API 610 Configuration

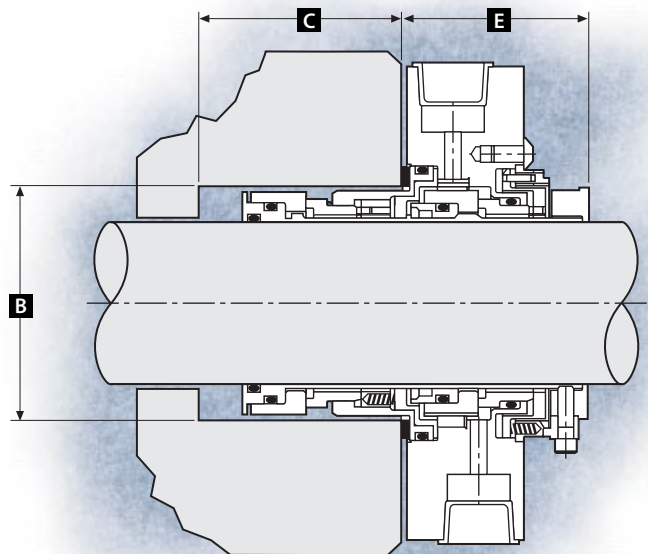
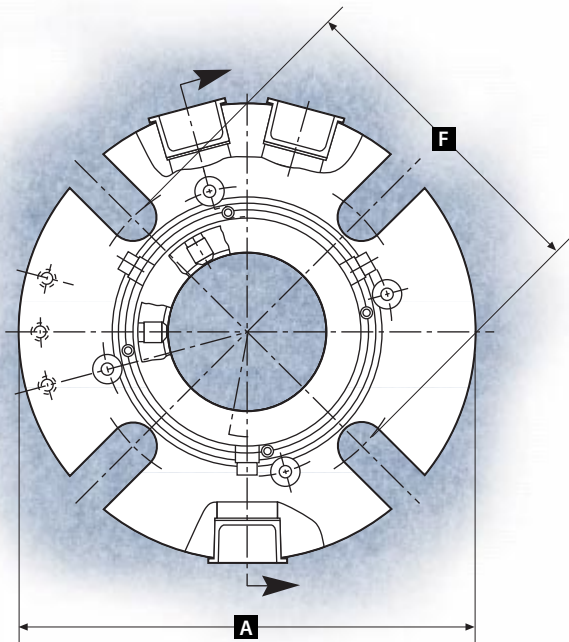
- 1/2" NPT Connections
- Bolt Holes and Pilot machined to fit specific equipment
- API 610 Gland with Quench and Drain Ports optional

225 Dimensional Data – Inch

	Seal Size																															
	1.000	1.125	1.250	1.375	1.500	1.625	1.750	1.875	2.000	2.125	2.250	2.375	2.500	2.625	2.750	2.875	3.000	3.125	3.250	3.375	3.500	3.625	3.750	3.875	4.000	4.125	4.250	4.375	4.500	4.625	4.750	
A – MAX	4.11	4.11	4.11	4.36	4.49	4.99	5.49	5.49	5.49	5.99	5.99	5.99	6.49	6.45	7.71	7.83	7.94	7.99	8.19	8.31	8.44	8.50	8.72	8.40	8.96	8.99	8.99	9.34	9.49	9.49	10.49	
B – MIN	1.75	1.88	2.00	2.13	2.25	2.38	2.50	2.63	2.75	2.88	3.00	3.13	3.25	3.63	3.75	3.88	4.00	4.13	4.25	4.38	4.50	4.63	4.75	4.88	5.00	5.13	5.25	5.38	5.50	5.63	5.75	
B – MAX	2.00	2.13	2.25	2.38	2.50	2.63	2.75	2.88	3.00	3.13	3.25	3.38	3.89	4.19	4.32	4.44	4.57	4.69	4.82	4.94	5.07	5.19	5.32	5.44	5.57	5.69	5.82	5.94	6.07	6.19		
C – MIN	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	2.48	2.48	2.48	2.48	2.48	2.48	2.48	2.48	2.48	2.48	2.48	2.48	2.48	2.48	2.48	2.48	2.48	2.48		
E – MAX	2.13	2.13	2.13	2.13	2.13	2.13	2.13	2.13	2.13	2.13	2.13	2.13	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75		
F – MIN 3/8"	2.86	2.98	3.11	3.23	3.36	3.48	3.62	3.75	4.00	4.25	4.37	4.41	4.63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
F – MIN 1/2"	2.98	3.11	3.23	3.36	3.48	3.61	3.75	3.87	4.12	4.37	4.50	4.55	4.75	5.37	5.50	5.62	5.75	5.87	6.00	6.12	6.25	6.37	6.50	6.62	6.75	6.87	7.00	7.12	7.25	7.37	7.50	
F – MIN 5/8"	-	-	-	-	-	-	-	-	-	4.50	4.62	4.67	4.87	5.50	5.62	5.75	5.87	6.00	6.12	6.25	6.37	6.50	6.62	6.75	6.87	7.00	7.12	7.25	7.37	7.50	7.62	
F – MIN 3/4"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.37	6.50	6.62	6.75	6.87	7.00	7.12	7.25	7.37	7.50	7.62	7.75

KEY:

A – Gland Diameter B – Stuffing Box Inside Diameter
 C – Minimum Stuffing Box Depth E – Outboard Seal Length F – Minimum Bolt Circle By Bolt Size



225 Dimensional Data – Metric (mm)

	Seal Size																							
	25	28	30	32	33	35	38	40	43	45	48	50	55	60	65	70	75	80	85	90	95	100	110	120
A – MAX	104	104	104	104	113	111	114	127	127	139	139	139	152	152	164	196	202	203	211	214	221	228	237	266
B – MIN	44	47	49	51	52	54	57	59	62	64	67	69	74	79	92	95	102	105	111	115	121	127	137	146
B – MAX	50	53	55	57	58	60	63	62	65	67	70	72	77	82	99	106	113	116	122	125	132	138	148	157
C – MIN	49	49	49	49	49	49	49	49	49	49	49	49	49	49	63	63	63	63	63	63	63	63	63	63
E – MAX	54	54	54	54	54	54	54	54	54	54	54	54	54	54	70	70	70	70	70	70	70	70	70	70
F – MIN 10 mm	73	76	77	79	80	82	85	87	90	92	95	97	102	112	-	-	-	-	-	-	-	-	-	-
F – MIN 12 mm	75	78	79	81	82	84	87	89	92	94	97	99	104	114	135	139	145	149	155	159	164	171	180	190
F – MIN 16 mm	-	-	-	-	-	-	-	-	-	-	-	-	108	118	139	143	149	153	159	163	168	175	184	194
F – MIN 20 mm	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	162	167	172	179	188	198

KEY:

A – Gland Diameter B – Stuffing Box Inside Diameter
 C – Minimum Stuffing Box Depth E – Outboard Seal Length F – Minimum Bolt Circle By Bolt Size

Standard Materials**

All Metal Parts: 316 SS.
 Springs: Hastelloy C*.
 O-Rings: Fluorocarbon or AFLAS† installed; EPR included.
 Rotary Face Inboard: Silicon Carbide, Tungsten Carbide.
 Rotary Face Outboard: Silicon Carbide.
 Stationary Face: Duplex Carbide™, Carbon, Silicon Carbide, Tungsten Carbide.

Temperature

To 300°F (150°C) Ethylene Propylene.
 To 400°F (205°C) Fluorocarbon, AFLAS.
 To 500°F (260°C) Perfluoroelastomer.

Speed

To 4000 RPM (20 mps).

Pressure

To 600 psi (40 BAR), inboard, outboard.

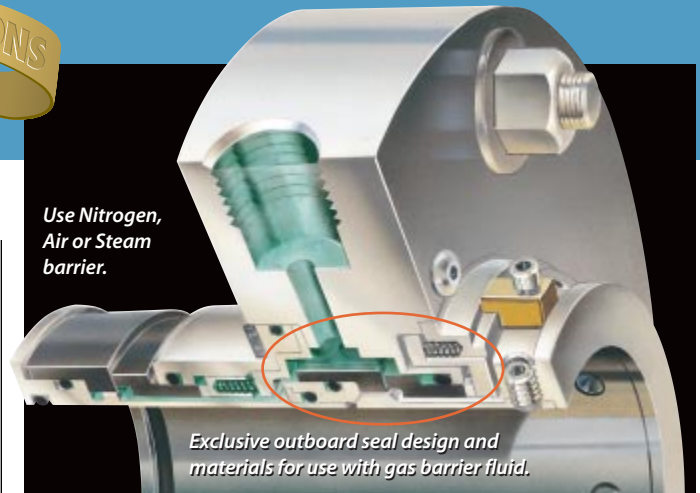
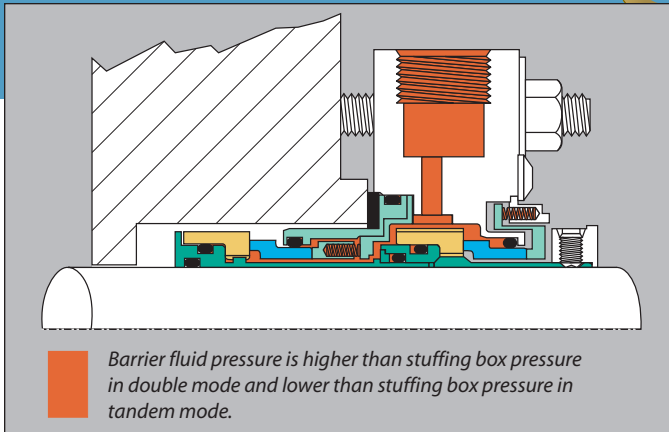
* Haynes International, Inc. Registered Trademark.
 ** Other materials available upon request.

† Asahi Glass Company Ltd. Registered Trademark.

CHESTERTON®

225™ Cartridge Dual Seal

Total
SYSTEM SOLUTIONS



Controlled balance and superior pressure handling in double or tandem barrier mode

The CHESTERTON 225 Dual Seal features in-series (tandem-oriented) configuration with both inboard and outboard sets of faces oriented in the same direction and the outboard faces sealing on the outside diameter. In-series dual seals are recommended for the most demanding leakage control requirements. The CHESTERTON 225 brings controlled hydraulic balance to both sets of faces, with 60/40 inboard and 70/30 outboard in double mode, and 70/30 for both sets in tandem mode. In double mode, barrier fluid pressure can reach 250 psi (17 BAR) over process pressure, while in tandem mode, the 225 can handle up to 600 psi (40 BAR) inboard and out.

Gas assisted version for emissions control and superior sealing of gas barrier fluid

No liquid barrier fluid required. Use nitrogen, compressed air or steam as the barrier fluid. Simplifies seal environmental controls and eliminates risk of process contamination from liquid barrier fluid. 225 Gas Assisted Dual Seal contains leakage both ways. Process is sealed positively, while full contact faces seal gas barrier from leakage to atmosphere or into process.

Achieve total emissions management with inert gas barrier flow through to plant flare. Rated to 0 (zero) ppm configured with vapor recovery system. Set up with check valve and optional alarm to detect and control inboard seal leakage.

Self-lubricating outboard faces with proprietary materials and finishes for dry running with high reliability. Provides secure backup for inboard seal.

The following are trademarks of A. W. CHESTERTON COMPANY: 225, Self-Centering Lock Ring, Duplex Carbide.

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