

891 ROTARY SEAL

FITS ALL DIN, ISO, ANSI
AND OTHER POPULAR PUMPS

OPERATES AT PRESSURES
UP TO 42 BAR (600 PSI)

NO SHAFT SLEEVE WEAR
SELF-ALIGNING CAPABILITY



Extends capabilities and reliability of general service sealing for plant-wide usage.



Interchangeability of material

- Standard carbon rotary seal face can be easily changed in the field to silicon carbide or tungsten carbide.
- Holder can be machined from any metal.

⑤ CHESTERTON Patented Self-Aligning Stationary

CHESTERTON 891 Rotary Seal may be run against conventional stationaries, however, as shown with CHESTERTON Self-Aligning Stationary (SAS), stuffing box face alignment is automatic. Start-up leakage is controlled.

① Metal holder is support bushing in the event of shaft bending at start-up. The face is not disturbed if there is contact.

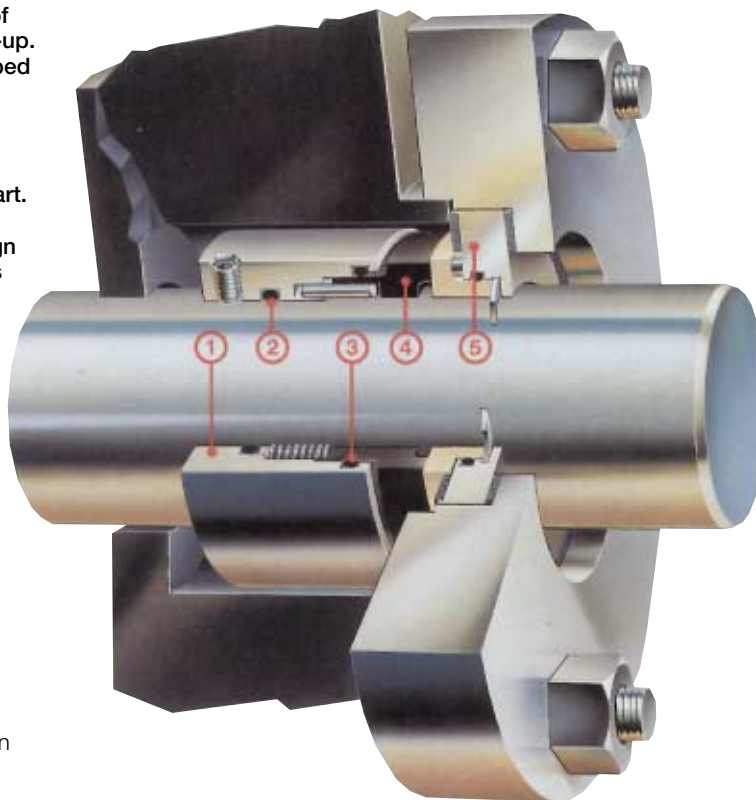
② Non-fretting design will not destroy shaft, sleeve or any metal part.

③ Balanced O-ring design with anti-clog features

- Springs out of fluid.
- Dynamic O-ring moves to a clean surface.
- Centrifugal force works to clean the seal faces and rotary element.

④ Computer profiled face design

- Ability to withstand large changes in operating temperature while keeping face flat.
- Ability to operate at pressures up to 42 BAR (600 psi) because heat generation does not greatly affect seal face flatness.
- Dynamic O-ring slides on smooth, non-metallic surface to prevent fretting and hang-up.
- Metal holder is never subjected to fretting or wear.



All wearing parts, seal faces, O-rings, screws and springs are replaceable at low cost, making in-plant rebuilding simple and economical. Parts being replaced can be crushed and bagged for environmentally safe disposal.

CHESTERTON® 891 ROTARY SEAL TECHNICAL DATA

Materials

METAL COMPONENTS:

316 Stainless Steel.
(Available on special order in Alloy 20,
Titanium, Monel®, Nickel, or
Hastelloy B** or C**).

SPRINGS: Hastelloy C.

SEAL FACES AVAILABLE:

Grade P658RC Carbon.
Reaction Bonded Silicon Carbide.
Solid Tungsten Carbide, with Nickel Binder.

O-RINGS:

Fluorocarbon installed.
Ethylene Propylene supplied with the seal.
Chemraz*** or Kalrez****
available upon request.

Pressure

711 mm (28") Hg vacuum to:

Seal	Shaft Size	Standard	Hastelloy Set Screws
891	18-30 mm	14 bar	21 bar
891	32-100 mm	28 bar	42 bar
†891X	120-200 mm	28 bar	-----
891	1"-1.250"	200 psi	300 psi
891	1.375"-4.50"	400 psi	600 psi
†891X	4.75"-8.0"	400 psi	-----

† Dimensions available on a separate sheet.

Temperature

-30°C (-20°F) to 205°C (400°F)
with Fluorocarbon.

-55°C (-65°F) to 150°C (300°F)
with Ethylene Propylene.

-18°C (0°F) to 260°C (500°F)
with Kalrez.

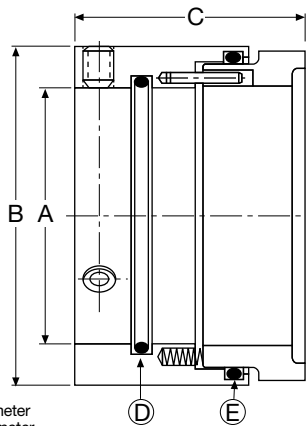
-30°C (-20°F) to 230°C (450°F)
with Chemraz.

* Inco family of companies Registered Trademark.

** Haynes International, Inc. Registered Trademark.

*** Greene, Tweed & Co. Registered Trademark.

**** DuPont's Registered Trademark.



A - Inner Diameter
B - Outer Diameter
C - Operating Length
D - Static O-ring
E - Dynamic O-ring

891 is a trademark of the A. W. Chesterton Company.

Dimensional Data

SHAFT SIZE mm	A		B		C		D	E
	METRIC	INCH	METRIC	INCH	METRIC	INCH		
18	18,11	.713	32,28	1.271	35,00	1.378	116	121
20	20,11	.791	34,29	1.350	35,00	1.378	117	122
22	22,11	.870	36,30	1.429	35,00	1.378	118	123
24	24,11	.949	38,30	1.508	35,00	1.378	119	125
25	25,11	.988	39,29	1.547	35,00	1.378	120	125
28	28,11	1.106	42,29	1.665	35,00	1.378	122	127
30	30,11	1.185	44,30	1.744	35,00	1.378	123	128
32	32,11	1.264	46,30	1.823	44,45	1.750	124	130
33	33,11	1.303	47,90	1.886	44,45	1.750	125	131
35	35,11	1.382	49,48	1.948	44,45	1.750	126	132
38	38,11	1.500	54,28	2.137	44,45	1.750	128	134
40	40,11	1.579	56,08	2.208	44,45	1.750	129	135
43	43,11	1.697	59,08	2.326	44,45	1.750	131	137
45	45,11	1.776	61,09	2.405	44,45	1.750	133	139
48	48,11	1.894	64,11	2.524	44,45	1.750	134	141
50	50,11	1.973	66,09	2.602	44,45	1.750	136	139
55	55,11	2.169	71,07	2.798	44,45	1.750	139	145
60	60,11	2.366	77,14	3.037	44,45	1.750	142	148
65	65,11	2.563	83,01	3.268	44,45	1.750	145	151
70	70,11	2.760	86,08	3.389	44,45	1.750	148	152
75	75,11	2.957	98,43	3.875	50,80	2.000	234	238
80	80,11	3.154	104,78	4.125	50,80	2.000	236	240
85	85,11	3.350	107,95	4.250	50,80	2.000	237	241
90	90,11	3.547	114,30	4.500	50,80	2.000	239	243
95	95,11	3.744	117,48	4.625	50,80	2.000	240	244
100	100,11	3.941	123,83	4.875	50,80	2.000	242	246

SHAFT SIZE INCH	A		B		C		D	E
	INCH	METRIC	INCH	METRIC	INCH	METRIC		
1.000	1.004	25,50	1.573	39,95	1.375	35,00	120	126
1.125	1.129	28,68	1.698	43,13	1.375	35,00	122	128
1.250	1.254	31,85	1.823	46,30	1.750	44,45	124	130
1.375	1.379	35,03	1.948	49,48	1.750	44,45	126	132
1.500	1.504	38,20	2.143	54,43	1.750	44,45	128	134
1.625	1.629	41,38	2.268	57,61	1.750	44,45	130	136
1.750	1.754	44,55	2.393	60,78	1.750	44,45	132	138
1.875	1.879	47,73	2.518	63,96	1.750	44,45	134	140
2.000	2.004	50,90	2.643	67,13	1.750	44,45	136	142
2.125	2.129	54,08	2.768	70,31	1.750	44,45	138	144
2.250	2.254	57,25	2.893	73,48	1.750	44,45	140	146
2.375	2.379	60,43	3.018	76,66	1.750	44,45	142	148
2.500	2.504	63,60	3.143	79,83	1.750	44,45	144	150
2.625	2.629	66,78	3.268	83,01	1.750	44,45	146	151
2.750	2.754	69,95	3.625	92,08	2.000	50,80	232	236
2.875	2.879	73,13	3.750	95,25	2.000	50,80	233	237
3.000	3.004	76,30	3.875	98,43	2.000	50,80	234	238
3.125	3.129	79,48	4.000	101,60	2.000	50,80	235	239
3.250	3.254	82,65	4.125	104,78	2.000	50,80	236	240
3.375	3.379	85,83	4.250	107,95	2.000	50,80	237	241
3.500	3.504	89,00	4.375	111,13	2.000	50,80	238	242
3.625	3.629	92,18	4.500	114,30	2.000	50,80	239	243
3.750	3.754	95,35	4.625	117,48	2.000	50,80	240	244
3.875	3.879	98,53	4.750	120,65	2.000	50,80	241	245
4.000	4.004	101,70	4.875	123,83	2.000	50,80	242	246
4.125	4.129	104,88	5.000	127,00	2.000	50,80	243	247
4.250	4.254	108,05	5.125	130,18	2.000	50,80	244	248
4.375	4.379	111,23	5.250	133,35	2.000	50,80	245	249
4.500	4.504	114,40	5.375	136,53	2.000	50,80	246	250

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