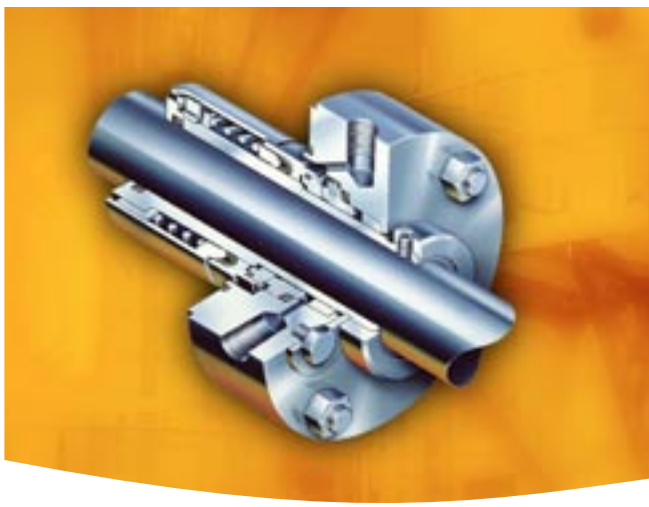
UC Series
Single pusher design

UC Series seals are balanced pusher seals with a substantial single coil spring that provides exceptional performance in the most demanding services including refineries, pipelines, and petrochemical services. UC seals are fully compliant with API 682 / ISO 21049, Type A requirements.



Features and Benefits

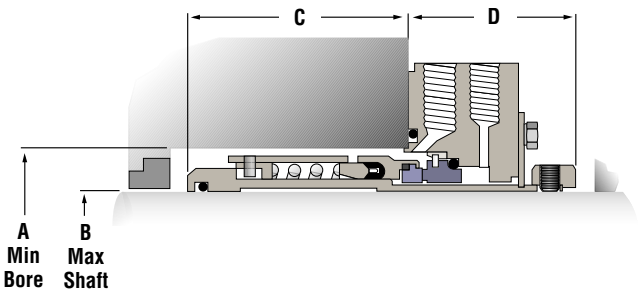
- Rugged single pusher seal is designed with thick cross-section components and built for long-term, reliable operation in heavy duty services.
- Large, low spring rate single coil spring tolerates axial setting dimensions while reducing opportunity for clogging and hang-up from solids.
- Silicon carbide rotating face is mounted in a graphite ring to avoid shrink fit distortions and sustain a flat seal face for low emissions performance.
- Robust U-cup seal flexibly mounts the rotating seal face while compensating for minor misalignment of the shaft and maintaining consistent seal face contact.
- Spring holder enables a strong drive linkage from the sleeve to the seal face while isolating the spring from torque.
- Seal installation is simplified with a cartridge seal assembly or, as special equipment requirements demand, the seal can be installed by components.

Operating Parameters

Pressure	UC:	Up to 400 psi (27.6 bar)
	UO:	Up to 1000 psi (69.0 bar)
	UOP:	Up to 1500 psi (103.4 bar)
Temperature		-40 to 400°F (-40 to 204°C)
Specific Gravity		0.45 and higher
Shaft Speed		Up to 75 fps (23 m/s)
Shaft Size		0.556 to 5.838 inch (14.12 to 148.29 mm)

Materials of Construction

Metal Components	316 Stainless Steel, Alloy 20, Alloy 400, Alloy C-276
Rotating Face	Silicon Carbide, Tungsten Carbide
Stationary Face	Carbon, Silicon Carbide
Gaskets	Fluoroelastomer, Perfluoro-elastomer, Nitrile, EPDM
Spring	316 Stainless Steel



Specialized designs for specific applications

UCQ High balance face for use in light hydrocarbon services.

UO Multi-component rotating face for service pressures up to 1000 psi (69.0 bar).

UOP Same UO rotating face with a custom designed stationary face for high pressure services up to 1500 psi (103.4 bar).

UZ Short axial length design for short seal chambers.

Dimensional Data

Seal	inches					Seal	millimeters				
Size	A	B	C	C(UZ)	D	Size	A	B	C	C(UZ)	D
1062	1.953	0.556	1.797	1.047	1.985	1062	49,61	14,12	45,64	26,59	50,42
1125	2.015	0.587	1.431	1.031	2.032	1125	51,18	14,91	36,34	26,19	51,61
1187	2.109	0.713	1.797	1.016	2.203	1187	53,57	18,11	45,62	25,81	55,96
1250	2.250	0.775	2.141	1.203	2.141	1250	57,15	19,69	54,37	30,56	54,38
1312	2.313	0.838	2.344	1.344	2.250	1312	58,75	21,29	59,53	34,14	52,15
1375	2.390	0.900	2.297	1.328	2.360	1375	60,71	22,86	58,34	33,73	59,94
1437	2.438	0.962	2.156	1.281	2.313	1437	61,93	24,43	54,77	32,54	58,75
1500	2.515	1.025	2.172	1.266	2.360	1500	63,88	26,04	55,17	32,16	59,94
1625	2.813	1.088	3.203	1.734	2.453	1625	71,44	27,64	81,36	44,04	62,31
1750	2.892	1.213	2.375	1.313	2.657	1750	73,44	30,81	60,33	33,35	67,49
1875	3.001	1.338	2.508	1.516	2.609	1875	76,21	33,99	63,69	38,51	66,27
2000	3.344	1.400	3.656	2.031	2.656	2000	84,92	35,56	92,87	51,59	67,46
2062	3.220	1.463	2.641	1.641	2.828	2062	81,78	37,16	67,07	41,68	71,83
2125	3.438	1.525	3.031	1.813	3.000	2125	87,31	38,74	76,99	46,50	76,10
2250	3.393	1.713	2.406	1.750	2.875	2250	86,17	43,51	61,12	44,45	73,02
2375	3.751	1.775	3.594	2.063	2.844	2375	95,26	45,09	91,28	52,40	72,24
2500	3.813	1.900	3.547	2.109	2.891	2500	96,85	48,26	90,09	53,57	73,43
2625	3.876	1.963	2.828	1.859	2.953	2625	98,45	49,86	71,83	47,22	75,01
2687	4.063	2.088	3.594	2.250	2.844	2687	103,20	53,04	91,29	57,15	72,24
2875	4.188	2.275	3.172	2.078	3.078	2875	106,38	57,79	80,57	52,78	78,18
3000	4.438	2.400	3.313	2.250	3.250	3000	112,73	60,96	84,15	57,15	82,55
3125	4.563	2.525	3.391	2.328	3.234	3125	115,90	64,14	86,13	59,13	82,14
3250	4.563	2.650	3.328	2.453	3.234	3250	115,90	67,31	84,53	62,31	82,14
3375	4.876	2.775	3.313	2.156	3.468	3375	123,85	70,49	84,15	54,76	88,09
3500	4.938	2.900	3.063	2.188	3.468	3500	125,43	73,66	77,80	55,58	88,09
3625	4.938	3.025	3.094	2.219	3.500	3625	125,43	76,84	78,59	56,36	88,90
3750	5.188	3.150	3.578	2.891	3.296	3750	131,78	80,01	90,88	73,43	83,72
3813	5.438	3.213	3.703	2.484	3.234	3813	138,13	81,61	94,06	63,09	82,14
4000	5.376	3.400	3.469	-	3.406	4000	136,55	86,36	88,11	-	86,51
4250	5.688	3.650	3.328	-	3.515	4250	144,48	92,71	84,53	-	89,28
4312	5.875	3.650	3.375	-	3.468	4312	149,23	92,71	85,73	-	88,09
4500	6.063	3.900	3.328	-	3.515	4500	154,00	99,06	84,53	-	89,28
4875	6.375	4.213	3.656	-	3.437	4875	161,93	107,01	92,86	-	87,30
5125	6.750	4.463	4.094	-	3.593	5125	171,45	113,36	103,99	-	91,26
5500	7.188	4.838	4.219	-	3.562	5500	182,58	122,89	107,16	-	90,05
6000	7.875	5.400	4.313	-	4.093	6000	200,03	137,16	109,55	-	103,96
6500	8.375	5.838	4.594	-	4.250	6500	212,73	148,29	116,69	-	107,95

Note: For additional sizes and conditions not listed, contact your local Flowserve representative.

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USA and Canada
Kalamazoo, Michigan USA
Telephone: 1 269 381 2650
Telefax: 1 269 382 8726

Europe, Middle East, Africa
Essen, Germany
Telephone: 49 201 3937-0
Telefax: 49 201 2200-561

Asia Pacific
Singapore
Telephone: 65 6544 6800
Telefax: 65 6214 0541

Latin America
Mexico City
Telephone: 52 55 5567 7170
Telefax: 52 55 5567 4224