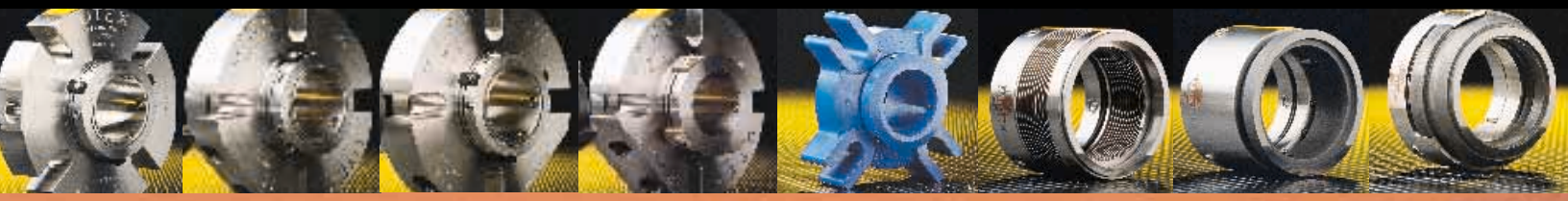
UTEX INDUSTRIES, INC.

Mechanical Seals

C A T A L O G



CARTRIDGE SEALS

METAL BELLOWS CARTRIDGE SEALS

HIGH PRESSURE PIPELINE SEALS

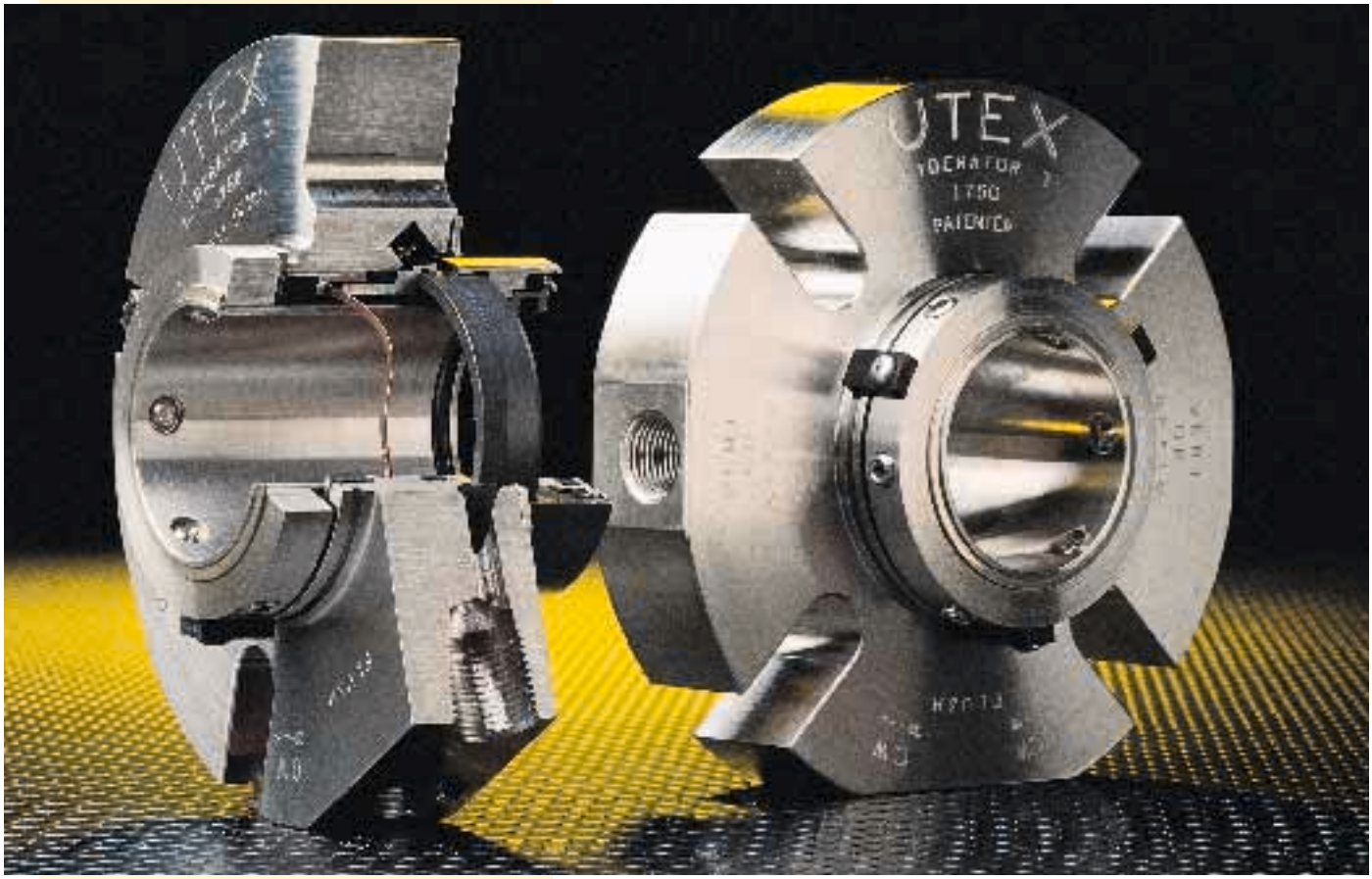
COMPOSITE CARTRIDGE SEALS

ROTARY UNITS
- METAL BELLOWS
- MULTI SPRING
- OUTSIDE MOUNT

STATIONARY SEATS
- O-RING
- BLOCK
- CLAMP
- "L" TYPE

UTEX INDUSTRIES, INC.
Taking Sealing Technology Beyond Tomorrow
ISO 9001 Certified

LIBERATOR™ I



LIBERATOR I Technical Data

MATERIALS

METAL PARTS
316 SS metal parts are standard.

STATIONARY FACE
CNFJ-B grade carbon is standard. Tungsten Carbide and Silicon Carbide are available.

ROTATING SEAL FACE
Alpha sintered Silicon Carbide.

O-RINGS
Aflas is standard. EPDM, Neoprene, Nitrile, Chemraz, Kalrez, and Viton are available.

TEMPERATURE

-60°F TO +400°F	-50°C TO +204°C

PRESSURE

400 psi	27 bar

SPEED

5000 fpm	25 m/s

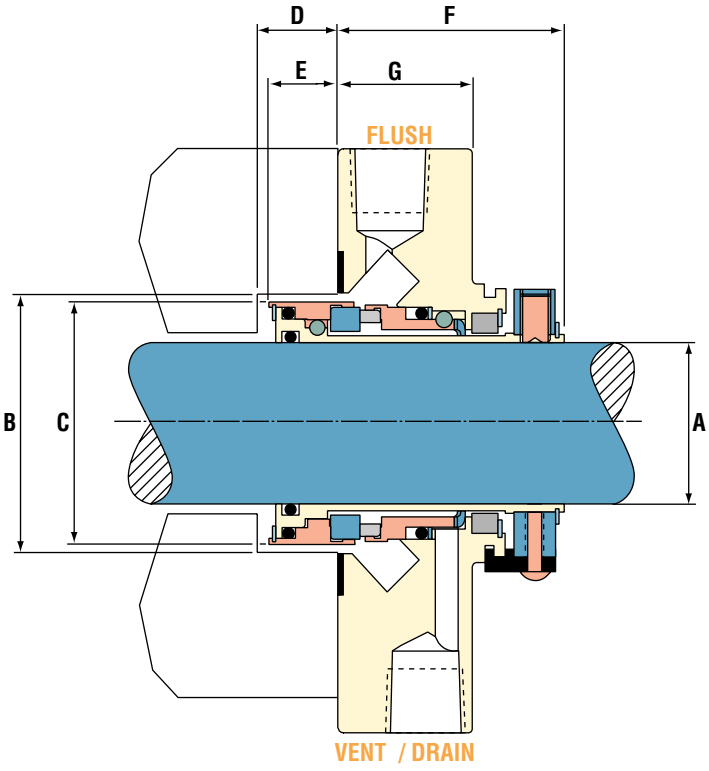
The Liberator I cartridge seal (patented) incorporates advanced seal design features. Using a "ball" drive, the Liberator resists twisting and torsional strains common to pin or key drives. The thin cross-section allows the Liberator I to be used in ANSI pumps without modifications.

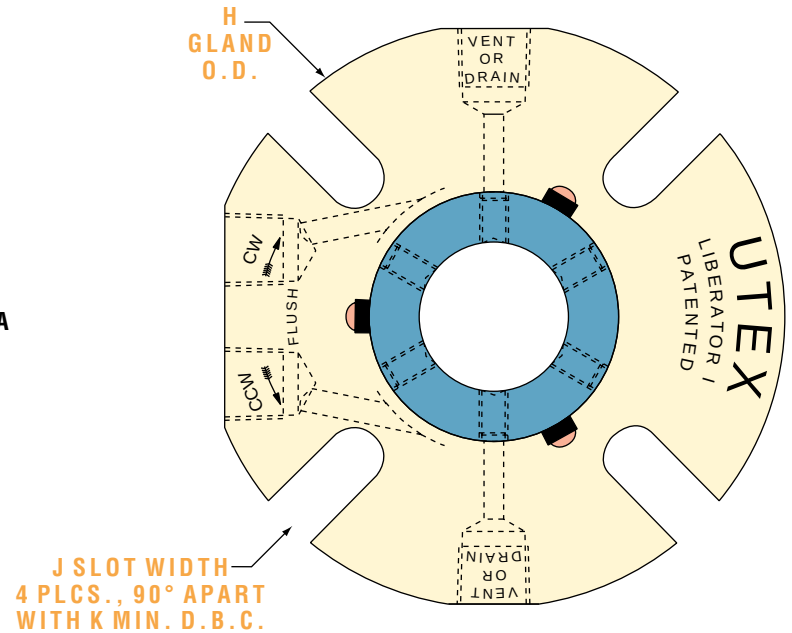
It employs a multi-crested wave spring which is a non-clogging spring isolated from the product for optimum corrosion resistance. Standard face materials are carbon vs. silicon carbide which together provide the highest PV rating of any face material combination. The rotating seat and spring loaded stationary accept higher shaft speeds, heavier viscosity fluids, and greater misalignment.

Aflas® o-rings are standard in all Liberators giving them a broad range of chemical compatibility. The Liberator gland incorporates both vent and drain connections, a carbon throttle bushing, and provides two tangential flush ports for clockwise or counterclockwise pump rotation.

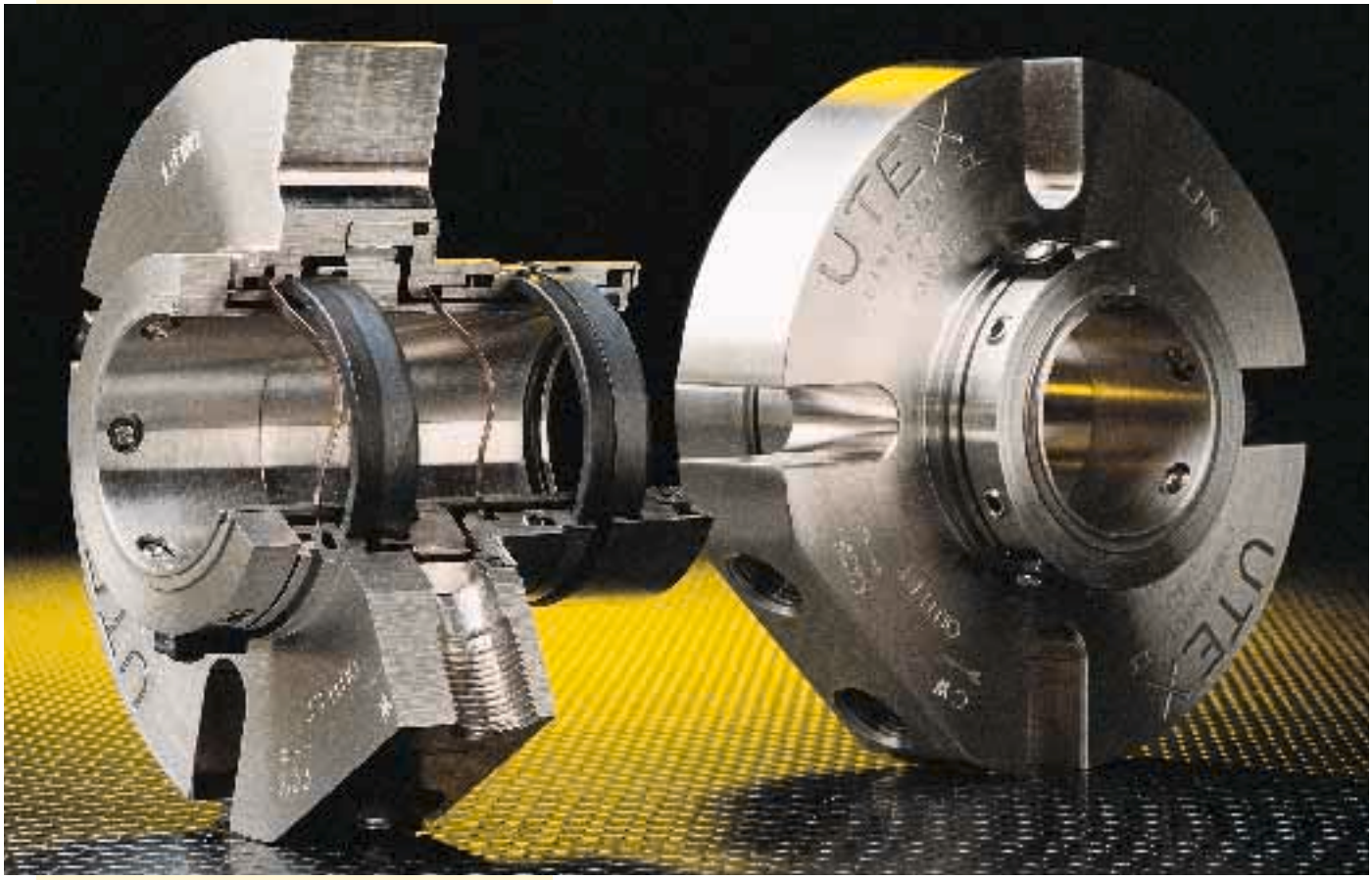
SHAFT SIZE		STUFFING BOX BORE		SEAL O.D.	STUFFING BOX DEPTH	IN-BOARD	OUT-BOARD	GLAND WIDTH	GLAND O.D.	SLOT WIDTH	BOLT CIRCLE MIN. BY BOLT SIZE			
INCH	MM	MIN.	MAX.		(MIN.)	LENGTH	LENGTH				3/8 10	1/2 12	5/8 16	3/4
A		B		C	D	E	F	G	H	J	K			
1.000	25	1.625 41.5	1.875 48.0	1.565 39.8	0.812 21	.721 18.3	1.875 47.6	1.13 28.6	4.12 104.6	0.437 11.1	2.750 70			
1.125	28	1.750 44.5	2.000 51.0	1.690 42.9	0.812 21	.721 18.3	1.875 47.6	1.13 28.6	4.25 108.0	0.437 11.1	2.875 73			
1.250	30	1.875 48.0	2.125 54.0	1.815 46.1	0.812 21	.721 18.3	1.875 47.6	1.13 28.6	4.37 111.1	0.437 11.1	3.000 76			
	32	1.875 48.0	2.125 54.0	1.815 46.1	0.812 21	.721 18.3	1.875 47.6	1.13 28.6	4.37 111.1	0.437 11.1	3.000 76			
1.375	33	2.000 51.0	2.250 58.0	1.940 49.3	0.750 19	.656 16.7	1.937 49.2	1.19 30.2	4.18 106.2	0.437 11.1	3.125 79			
	35	2.000 51.0	2.250 58.0	1.940 49.3	0.750 19	.656 16.7	1.937 49.2	1.19 30.2	4.18 106.2	0.437 11.1	3.125 79			
1.500	38	2.250 57.5	2.500 64.0	2.187 55.6	0.937 24	.822 20.9	1.875 47.6	1.13 28.6	5.00 127.0	0.437 11.1	3.375 86			
1.562	40	2.312 59.0	2.562 66.0	2.250 57.2	0.937 24	.822 20.9	1.875 47.6	1.13 28.6	5.25 133.4	0.562 14.3	3.437 87	3.562 89		
1.625		2.375	2.625	2.312	0.937	.822	1.875	1.13	5.25	0.562	3.500	3.625		
1.750	45	2.500 63.5	2.750 70.0	2.437 61.9	0.937 24	.822 20.9	1.875 47.6	1.13 28.6	5.50 139.7	0.562 14.3	3.625 92	3.750 94		
1.875	48	2.625 67.0	2.875 73.0	2.562 65.1	0.937 24	.822 20.9	1.875 47.6	1.13 28.6	5.62 142.7	0.562 14.3	3.750 95	3.875 97		
2.000	50	2.750 70.0	3.000 77.0	2.687 68.3	0.937 24	.822 20.9	1.875 47.6	1.13 28.6	5.50 139.7	0.562 14.3	3.875 98	4.000 100		
2.125		2.875	3.125	2.812	0.937	.822	1.875	1.13	6.00	0.687	4.000	4.125	4.250	
2.187	55	2.937 75.0	3.187 81.0	2.875 73.0	0.937 24	.822 20.9	1.875 47.6	1.13 28.6	6.00 152.4	0.687 17.5	4.062 103	4.187 105	4.312 109	
2.250		3.000	3.250	2.937	0.937	.822	1.875	1.13	6.25	0.687	4.125	4.250	4.375	
2.375	60	3.125 79.5	3.375 86.0	3.062 77.8	0.937 24	.822 20.9	1.875 47.6	1.13 28.6	6.37 161.9	0.687 17.5	4.250 108	4.375 110	4.500 114	
2.500		3.250	3.500	3.187	0.937	.822	1.875	1.13	6.50	0.687	4.375	4.500	4.625	
2.625	65	3.375 86.0	3.625 93.0	3.312 84.1	0.937 24	.822 20.9	1.875 47.6	1.13 28.6	7.00 177.8	0.687 17.5	4.500 114	4.625 116	4.750 120	
2.750	70	3.750 95.5	4.250 108.0	3.625 92.1	1.000 25	.731 18.6	2.406 61.1	1.13 36.5	7.75 196.9	0.687 17.5	5.250 133	5.375 135	5.500 139	
2.875		4.000	4.500 3.875	1.000	.731	2.406	1.44	8.00	0.687	5.500	5.625	5.750		
3.000		4.000	4.500 3.875	1.000	.731	2.406	1.44	8.00	0.687	5.500	5.625	5.750		
3.125		4.250	4.750 4.125	1.000	.731	2.406	1.44	8.25	0.687	5.750	5.875	6.000		
3.250		4.250	4.750 4.125	1.000	.731	2.406	1.44	8.25	0.687	5.750	5.875	6.000		
3.375		4.500	5.000 4.375	1.000	.731	2.406	1.44	8.50	0.812	6.000	6.125	6.250	6.375	
3.500		4.500	5.000 4.375	1.000	.731	2.406	1.44	8.50	0.812	6.000	6.125	6.250	6.375	
3.625		4.750	5.250 4.625	1.000	.731	2.406	1.44	8.75	0.812	6.250	6.375	6.500	6.625	
3.750		4.750	5.250 4.625	1.000	.731	2.406	1.44	8.75	0.812	6.250	6.375	6.500	6.625	
3.875		5.000	5.500 4.875	1.000	.731	2.406	1.44	9.00	0.812	6.500	6.625	6.750	6.875	
4.000		5.000	5.500 4.875	1.000	.731	2.406	1.44	9.00	0.812	6.500	6.625	6.750	6.875	

METRIC NUMBERS ARE INDICATED IN BOLD RED. STANDARD UTEX SEALS ARE AVAILABLE FOR BOTH INCH AND MILLIMETER SHAFT SIZES LISTED IN COLUMN "A" ABOVE. FOR AVAILABILITY OF SEAL SIZES NOT LISTED IN THE TABLE, CONTACT YOUR UTEX REPRESENTATIVE.





LIBERATOR™ II



LIBERATOR II Technical Data

MATERIALS

METAL PARTS
316 SS metal parts are standard.

STATIONARY FACE
CNFJ-B grade carbon is standard. Tungsten Carbide and Silicon Carbide are available.

ROTATING SEAL FACE
Alpha sintered Silicon Carbide.

O-RINGS
Aflas is standard. EPDM, Neoprene, Nitrile, Chemraz, Kalrez, and Viton are available.

TEMPERATURE

-60°F TO +400°F	-50°C TO +204°C

PRESSURE

400 psi	27 bar

SPEED

5000 fpm	25 m/s

The Liberator II cartridge seal (patented) offers all of the design features of the Liberator I. In addition, it features two tangential outlet ports for clockwise or counterclockwise pump rotation. A pumping ring built in as a standard feature provides positive barrier fluid circulation.

The Liberator II is a double hydraulically balanced seal which allows it to be used as a double or tandem seal. In vertical installations, the secondary seal chamber is self-venting to insure proper lubrication of the secondary sealing faces. The barrier fluid at the secondary seal is on the O.D. of the sealing faces, which insures maximum heat dissipation.

SHAFT SIZE		STUFFING BOX BEFORE		SEAL O.D.	STUFFING BOX DEPTH	IN-BOARD LENGTH	OUT-BOARD LENGTH	GLAND WIDTH	GLAND O.D.	SLOT WIDTH	BOLT CIRCLE MIN. BY BOLT SIZE			
INCH	MM	MIN.	MAX.		(MIN.)						3/8 10	1/2 12	5/8 16	3/4
A		B		C	D	E	F	G	H	J	K			
1.000	**25**	1.625 **41.5**	1.875 **48.0**	1.565 **39.8**	1.875 **48**	1.750 **44.5**	2.042 **51.9**	1.23 **31.3**	4.12 **104.6**	0.437 **11.1**	2.750 **70**			
1.125	**28**	1.750 **44.5**	2.000 **51.0**	1.690 **42.9**	1.875 **48**	1.750 **44.5**	2.042 **51.9**	1.23 **31.3**	4.25 **108.0**	0.437 **11.1**	2.875 **73**			
1.250	**30**	1.875 **48.0**	2.125 **54.0**	1.815 **46.1**	1.875 **48**	1.750 **44.5**	2.042 **51.9**	1.23 **31.3**	4.37 **111.1**	0.437 **11.1**	3.000 **76**			
	32	1.875 **48.0**	2.125 **54.0**	1.815 **46.1**	1.875 **48**	1.750 **44.5**	2.042 **51.9**	1.23 **31.3**	4.37 **111.1**	0.437 **11.1**	3.000 **76**			
1.375	**33**	2.000 **51.0**	2.250 **58.0**	1.940 **49.3**	1.875 **48**	1.750 **44.5**	2.042 **51.9**	1.19 **30.2**	4.18 **106.2**	0.437 **11.1**	3.125 **79**			
	35	2.000 **51.0**	2.250 **58.0**	1.940 **49.3**	1.875 **48**	1.750 **44.5**	2.042 **51.9**	1.19 **30.2**	4.18 **106.2**	0.437 **11.1**	3.125 **79**			
1.500	**38**	2.250 **57.5**	2.500 **64.0**	2.187 **55.6**	2.000 **51**	1.875 **47.6**	2.042 **51.9**	1.23 **31.3**	5.00 **127.0**	0.437 **11.1**	3.375 **86**			
1.562	**40**	2.312 **59.0**	2.562 **66.0**	2.250 **57.2**	2.000 **51**	1.875 **47.6**	2.042 **51.9**	1.23 **31.3**	5.25 **133.4**	0.562 **14.3**	3.437 **87**	3.562 **89**		
1.625		2.375	2.625	2.312	2.000	1.875	2.042	1.23	5.25	0.562	3.500	3.625		
1.750	**45**	2.500 **63.5**	2.750 **70.0**	2.437 **61.9**	2.000 **51**	1.875 **47.6**	2.042 **51.9**	1.23 **31.3**	5.50 **139.7**	0.562 **14.3**	3.625 **92**	3.750 **94**		
1.875	**48**	2.625 **67.0**	2.875 **73.0**	2.562 **65.1**	2.000 **51**	1.875 **47.6**	2.042 **51.9**	1.23 **31.3**	5.62 **142.7**	0.562 **14.3**	3.750 **95**	3.875 **97**		
2.000	**50**	2.750 **70.0**	3.000 **77.0**	2.687 **68.3**	2.000 **51**	1.875 **47.6**	2.042 **51.9**	1.23 **31.3**	5.50 **139.7**	0.562 **14.3**	3.875 **98**	4.000 **100**		
		2.125	2.875	3.125	2.812	2.000	1.875	2.042	1.23	6.00	0.687	4.000	4.125	4.250
2.187	**55**	2.937 **75.0**	3.187 **81.0**	2.875 **73.0**	2.000 **51**	1.875 **47.6**	2.042 **51.9**	1.23 **31.3**	6.00 **152.4**	0.687 **17.5**	4.062 **103**	4.187 **105**	4.312 **109**	
		2.250	3.000	3.250	2.937	2.000	1.875	2.042	1.23	6.25	0.687	4.125	4.250	4.375
2.375	**60**	3.125 **79.5**	3.375 **86.0**	3.062 **77.8**	2.000 **51**	1.875 **47.6**	2.042 **51.9**	1.23 **31.3**	6.37 **161.9**	0.687 **17.5**	4.250 **108**	4.375 **110**	4.500 **114**	
		2.500	3.250	3.500	3.187	2.000	1.875	2.042	1.23	6.50	0.687	4.375	4.500	4.625
2.625	**65**	3.375 **86.0**	3.625 **93.0**	3.312 **84.1**	2.000 **51**	1.875 **47.6**	2.042 **51.9**	1.23 **31.3**	7.00 **177.8**	0.687 **17.5**	4.500 **114**	4.625 **116**	4.750 **120**	
2.750	**70**	3.750 **95.5**	4.250 **108.0**	3.625 **92.1**	2.312 **59**	2.181 **55.4**	2.406 **61.1**	1.44 **36.5**	7.75 **196.9**	0.687 **17.5**	5.250 **133**	5.375 **135**	5.500 **139**	
2.875		4.000	4.500	3.875	2.312	2.181	2.406	1.43	8.000	0.687	5.500	5.625	5.750	
3.000		4.000	4.500	3.875	2.312	2.181	2.406	1.43	8.000	0.687	5.500	5.625	5.750	
3.125		4.250	4.750	4.125	2.312	2.181	2.406	1.43	8.250	0.687	5.750	5.875	6.000	
3.250		4.250	4.750	4.125	2.312	2.181	2.406	1.43	8.250	0.687	5.750	5.875	6.000	
3.375		4.500	5.000	4.375	2.312	2.181	2.406	1.43	8.500	0.812	6.000	6.125	6.250	6.375
3.500		4.500	5.000	4.375	2.312	2.181	2.406	1.43	8.500	0.812	6.000	6.125	6.250	6.375
3.625		4.750	5.250	4.635	2.312	2.181	2.406	1.43	8.750	0.812	6.250	6.375	6.500	6.625
3.750		4.750	5.250	4.625	2.312	2.181	2.406	1.43	8.750	0.812	6.250	6.375	6.500	6.625
3.875		5.000	5.500	4.875	2.312	2.181	2.406	1.43	9.000	0.812	6.500	6.625	6.750	6.875
4.000		5.000	5.500	4.875	2.312	2.181	2.406	1.43	9.000	0.812	6.500	6.625	6.750	6.875

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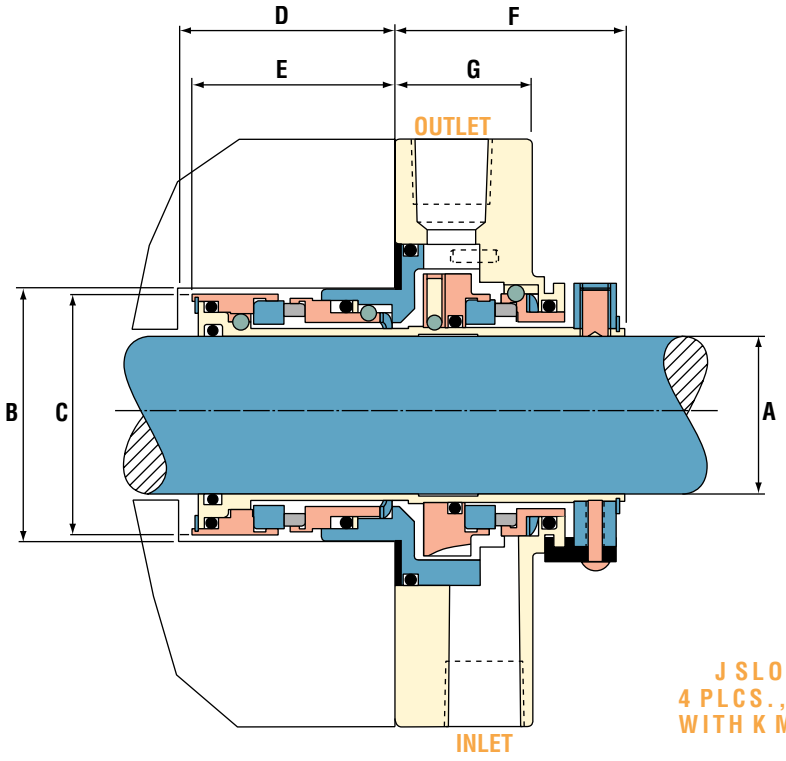
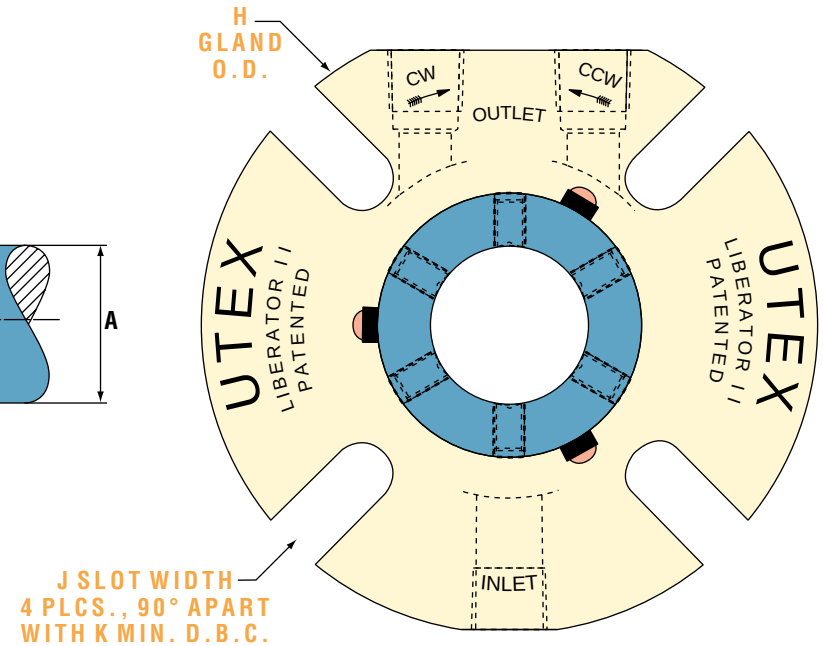
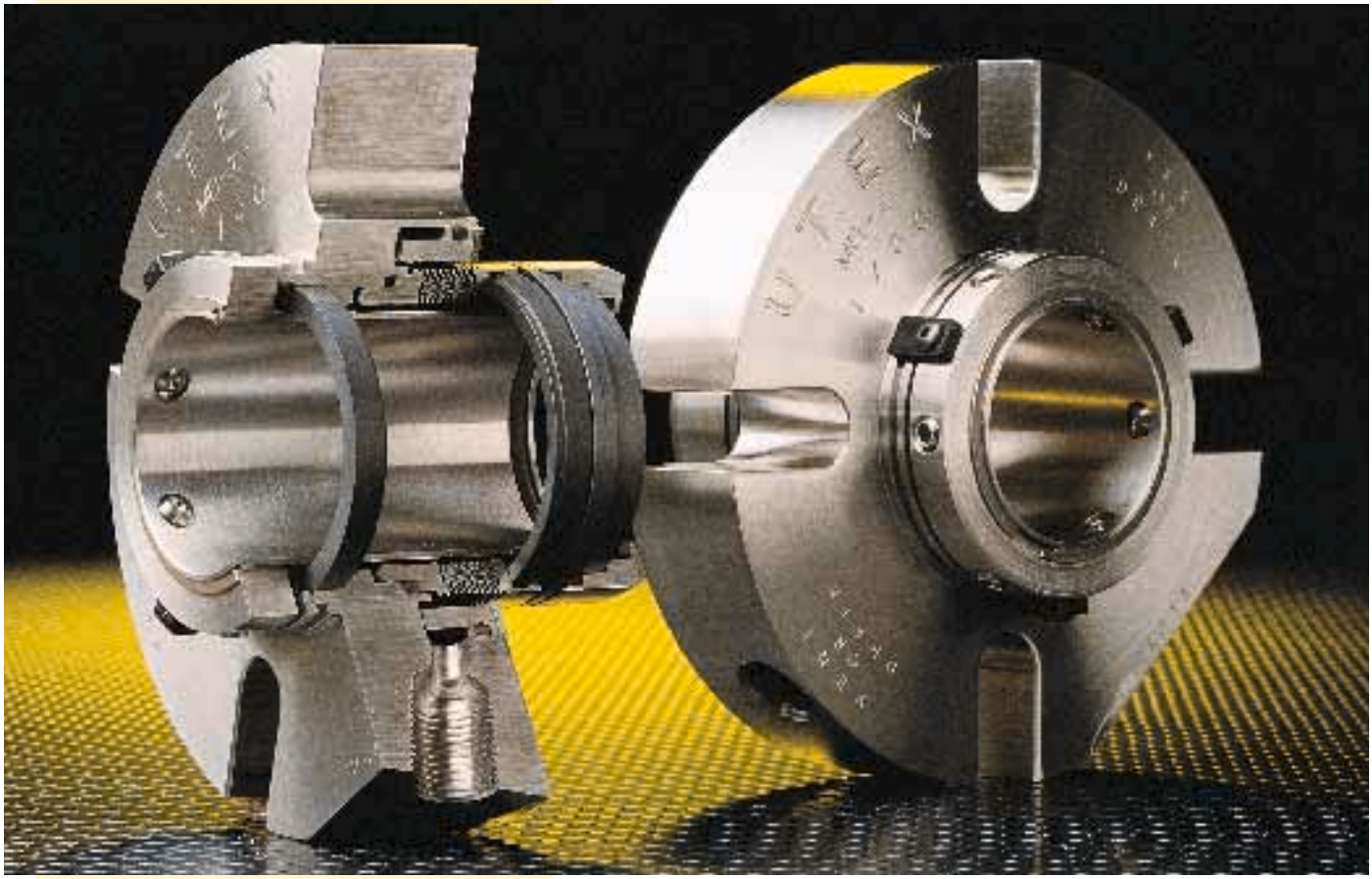




UTEX MB-I
Single Metal Bellows Cartridge Seal



MB-1 Technical Data

MATERIALS

BELLOWS & END FITTINGS
Hastelloy C-276 bellows core. 316 SS standard end fittings, Hastelloy C is available.

METAL PARTS
316 SS metal parts are standard. Hastelloy C and Alloy 20 are available.

STATIONARY SEAL FACE
CNFJ-B grade carbon is standard. Tungsten carbide and silicon carbide are available.

ROTATING SEAL FACE
Alpha sintered silicon carbide.

O-RINGS
Viton is standard. EPDM, Neoprene, Nitrile, Aflas, Chemraz, Kalrez, PTFE, and encapsulated Viton are available.

TEMPERATURE
-75°F to 400°F (-60°C to 204°C) depending on o-ring material chosen.

PRESSURE
Maximum pressure is 300 psi (20 bar)

SPEED
Up to 4500 fpm (23 m/s)

NOTES
Vent/Drain and flush connection sizes:
1/4" N.P.T. for seal sizes 1" thru 1 3/8"
3/8" N.P.T. for seal sizes 1 1/2" thru 2 3/4"

THE UTEX SEAL THAT DOUBLES YOUR OPTIONS

The compact and versatile MB-I can be used as either a stationary or rotating bellows seal. The MB-I is supplied in its standard configuration as a stationary bellows assembly. The mutually interchangeable bellows and seat allow easy, on-site conversion to a rotary bellows design.

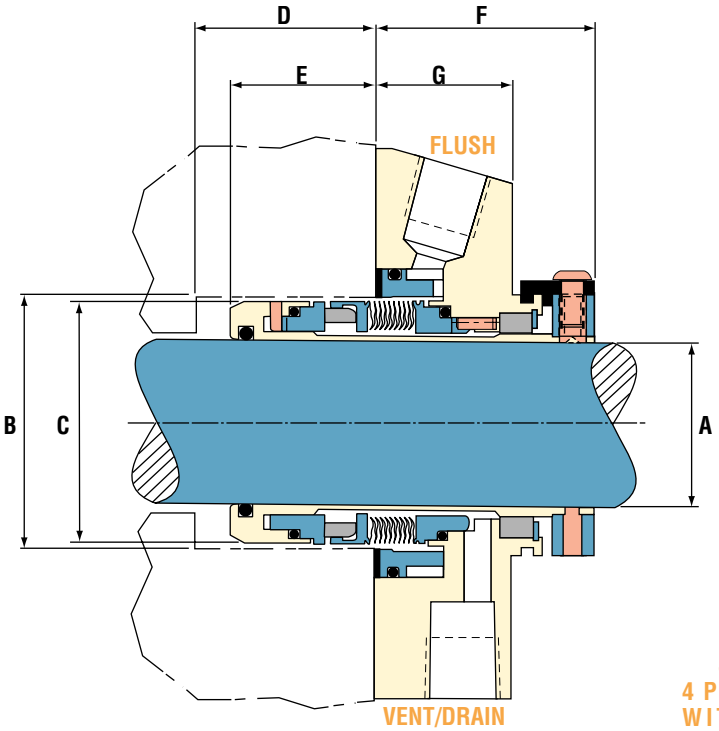
The bellows design provides even distribution of load around the entire circumference of the seal face. In addition, the need for dynamic o-rings, with associated frictional drag and wear, is eliminated. The extremely low mass of the face and bellows assembly improves face tracking characteristics during operation.

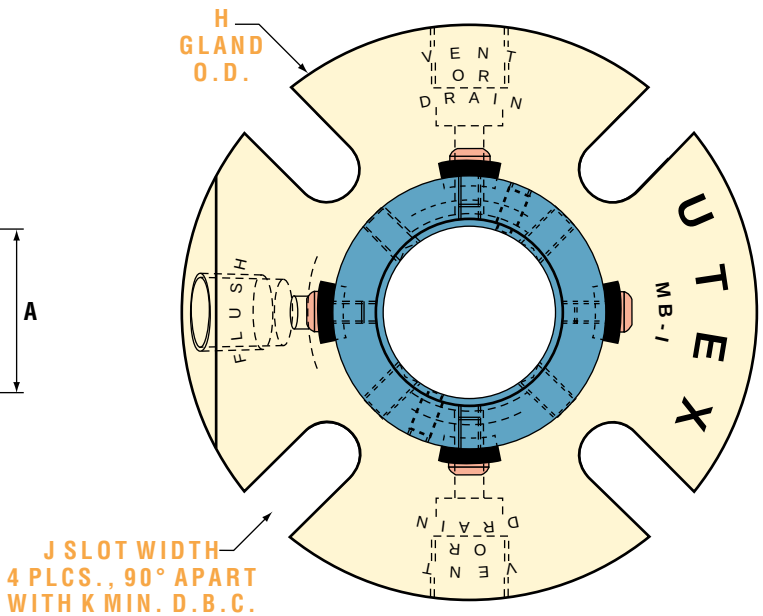
The MB-I's unique multi-ported flushing system uses a single gland connection that enters into an annular cavity. The flush medium flows around this cavity and exits through evenly spaced ports, traveling axially over the seal faces. This provides full 360° lubrication and cooling while protecting the faces from abrasive particles.

The MB-I fits ANSI pumps without modification. Temperature range is from -75°F to +400°F (-60°C to +204°C) depending on o-ring material chosen. Maximum pressure is 300 psi (20 bar), with speeds up to 4500 fpm (23 m/s).

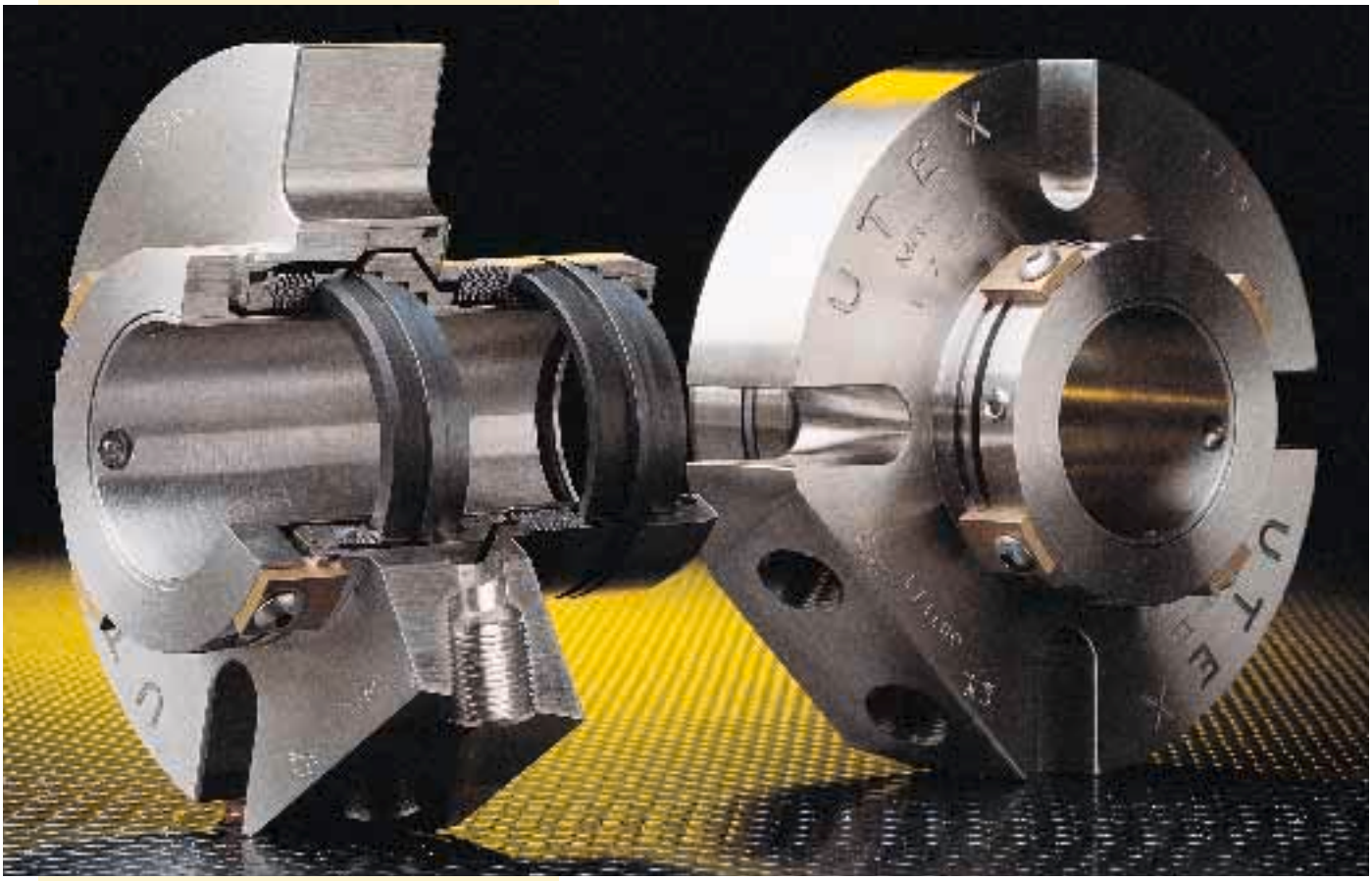
SHAFT SIZE		STUFFING BOX BORE		SEAL O.D.	STUFFING BOX DEPTH (MIN.)	IN-BOARD LENGTH	OUT-BOARD LENGTH	GLAND WIDTH	GLAND O.D.	SLOT WIDTH	BOLT CIRCLE MIN. BY BOLT SIZE		
INCH	MM	MIN.	MAX.								3/8 10	1/2 12	5/8 16
A		B		C	D	E	F	G	H	J	K		
1.000	25	1.625 41.5	1.875 48.0	1.562 39.7	1.156 30	1.047 26.6	1.937 49.2	1.19 30.2	4.11 104.4	.437 11.1	2.750 70		
1.125	28	1.750 44.5	2.000 51.0	1.687 42.9	1.156 30	1.047 26.6	1.937 49.2	1.19 30.2	4.11 104.4	.437 11.1	2.875 73		
1.250	30	1.875 48.0	2.125 54.0	1.812 46.0	1.156 30	1.047 26.6	1.937 49.2	1.19 30.2	4.18 106.2	.437 11.1	3.000 76		
	32	1.875 48.0	2.125 54.0	1.812 46.0	1.156 30	1.047 26.6	1.937 49.2	1.19 30.2	4.18 106.2	.437 11.1	3.000 76		
1.375	33	2.000 51.0	2.250 58.0	1.937 49.2	1.156 30	1.047 26.6	1.937 49.2	1.19 30.2	4.18 106.2	.437 11.1	3.125 79		
	35	2.000 51.0	2.250 58.0	1.937 49.2	1.156 30	1.047 26.6	1.937 49.2	1.19 30.2	4.18 106.2	.437 11.1	3.125 79		
1.500	38	2.250 57.5	2.500 64.0	2.187 55.6	1.406 36	1.281 32.5	2.000 50.8	1.25 31.8	4.49 114.0	.562 14.3	3.375 86	3.500 88	
1.625	40	2.375 60.5	2.625 67.0	2.312 58.7	1.406 36	1.281 32.5	2.000 50.8	1.25 31.8	4.99 126.7	.562 14.3	3.500 89	3.625 91	
1.750	45	2.500 63.5	2.750 70.0	2.437 61.9	1.453 37	1.328 33.7	2.000 50.8	1.25 31.8	5.49 139.4	.562 14.3	3.625 92	3.750 94	
1.875	48	2.625 67.0	2.875 73.0	2.562 65.1	1.453 37	1.328 33.7	2.000 50.8	1.25 31.8	5.49 139.4	.562 14.3	3.750 95	3.875 97	
2.000	50	2.750 70.0	3.000 77.0	2.687 68.3	1.453 37	1.328 33.7	2.000 50.8	1.25 31.8	5.49 139.4	.562 14.3	3.875 98	4.000 100	
2.125		2.875	3.250	2.812	1.453	1.328	2.000	1.25	5.99	.687	4.125	4.250	4.375
2.250	55	3.000 76.5	3.375 86.0	2.937 74.6	1.453 37	1.328 33.7	2.000 50.8	1.25 31.8	5.99 152.1	.687 17.5	4.250 108	4.375 110	4.500 114
2.375	60	3.125 79.5	3.625 93.0	3.062 77.8	1.453 37	1.328 33.7	2.000 50.8	1.25 31.8	6.24 158.5	.687 17.5	4.500 114	4.625 116	4.750 120
2.500		3.250	3.750	3.187	1.453	1.328	2.000	1.25	6.49	.687	4.625	4.750	4.875
2.625	65	3.375 86.0	3.875 99.0	3.312 84.1	1.453 37	1.328 33.7	2.000 50.8	1.25 31.8	6.99 177.5	.687 17.5	4.750 121	4.875 123	5.000 127
2.750	70	3.750 95.5	4.000 105.0	3.625 92.1	1.625 42	1.500 38.1	2.375 60.3	1.43 36.5	7.24 183.9	.687 17.5	5.000 127	5.125 129	5.250 133

METRIC NUMBERS ARE INDICATED IN BOLD RED. STANDARD UTEX SEALS ARE AVAILABLE FOR BOTH INCH AND MILLIMETER SHAFT SIZES LISTED IN COLUMN "A" ABOVE. FOR AVAILABILITY OF SEAL SIZES NOT LISTED IN THE TABLE, CONTACT YOUR UTEX REPRESENTATIVE.





UTEX MB-II
Dual Stationary Metal Bellows



MB-II Technical Data

MATERIALS

BELLOWS & END FITTINGS
Hastelloy C-276 bellows core. 316 SS standard end fittings, Hastelloy C available.

METAL PARTS
316 SS metal parts are standard. Hastelloy C and Alloy available.

STATIONARY SEAL FACE
CNFJ-B grade carbon is standard. Tungsten carbide and silicon carbide are available.

ROTATING SEAL FACE
Alpha sintered silicon carbide inboard seal. Reaction bonded silicon carbide outboard seal.

O-RINGS
Viton is standard. EPDM, Neoprene, Nitrile, Aflas, Chemraz, Kalrez, PTFE, and encapsulated Viton are available.

TEMPERATURE
-75°F to 400°F (-60°C to 204°C) depending on o-ring material chosen.

PRESSURE
A maximum pressure differential of 300 psi (20 bar) across either bellows:
Double Mode
Max. stuffing box pressure = 275 psi (19 bar)
Max. buffer pressure = 300 psi (20 bar)
Tandem Mode
Max. stuffing box pressure = 300 psi (20 bar)
Max. buffer pressure = 275 psi (19 bar)

SPEED:
Up to 4500 fpm (23 m/s)

NOTES:
1. INLET/OUTLET CONNECTION SIZES:
1/4" N.P.T. for seal sizes 1" thru 1 1/2"
3/8" N.P.T. for seal sizes 1 5/8" thru 2 3/4"

THE UTEX SEAL THAT KEEPS YOU PUMPING LONGER

The unique MB-II can be operated as either a double or tandem seal, both of which are hydraulically balanced, making it one of the most versatile seals available. It is designed and built to reduce emissions to EPA standards and to increase mean time between planned maintenance (MTBPM).

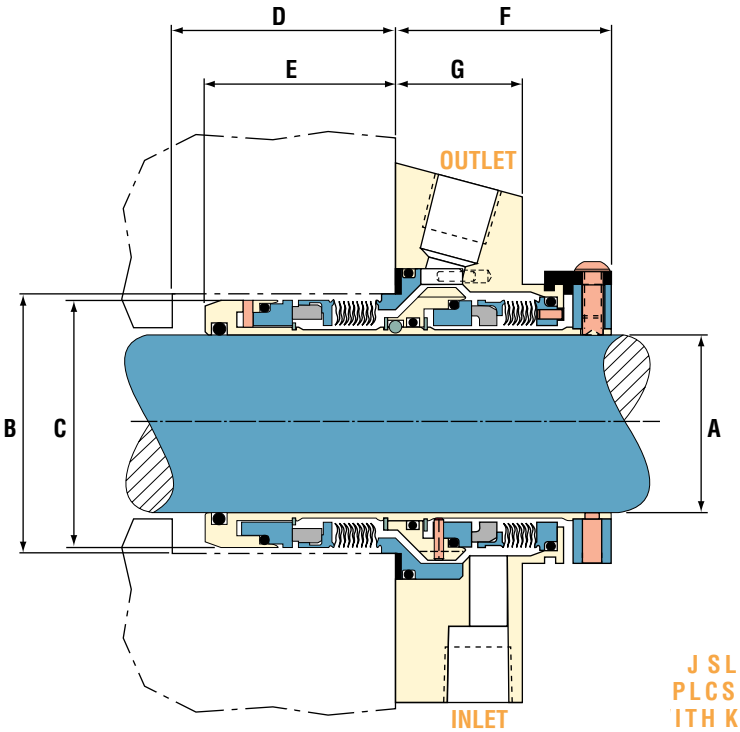
The dual stationary bellows assembly self adjusts for misalignment and reduces the potential for harmonic vibration. The extremely low mass of the face and bellows assembly improves face tracking characteristics during operation.

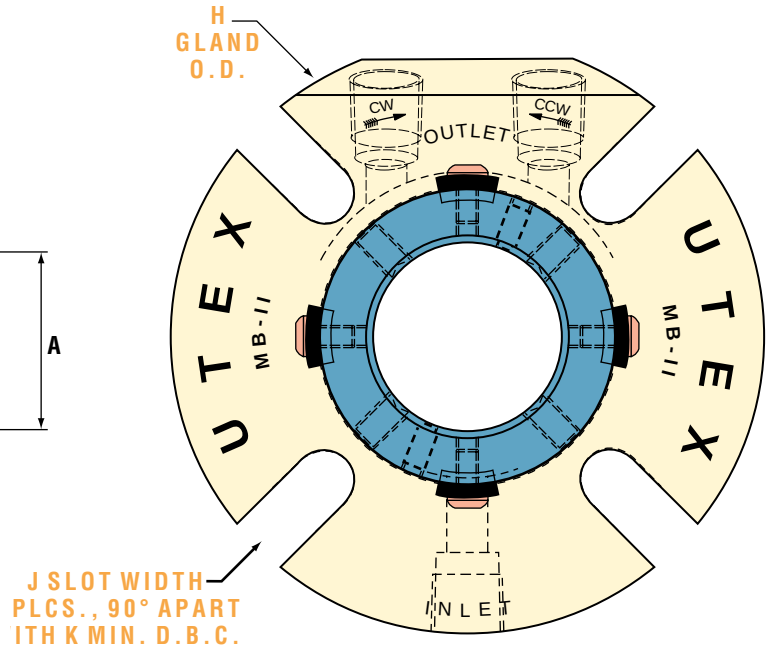
The buffer fluid is sealed on the O.D. of the outboard bellows. This prevents heat related problems resulting from air entrapment and dead fluid zones. Also, higher buffer fluid pressures are attainable. A radial flow pumping ring produces a high performance flow of buffer fluid for efficient cooling and helps prevent abrasives from settling in the seal cavity.

The MB-II fits ANSI pumps without modification. Temperature range is from -75°F to + 400°F (-60°C to + 204°C) depending on o-ring material chosen. Maximum pressure differential is 300 psi (20 bar) across either bellows, with speeds up to 4500 fpm (23m/s).

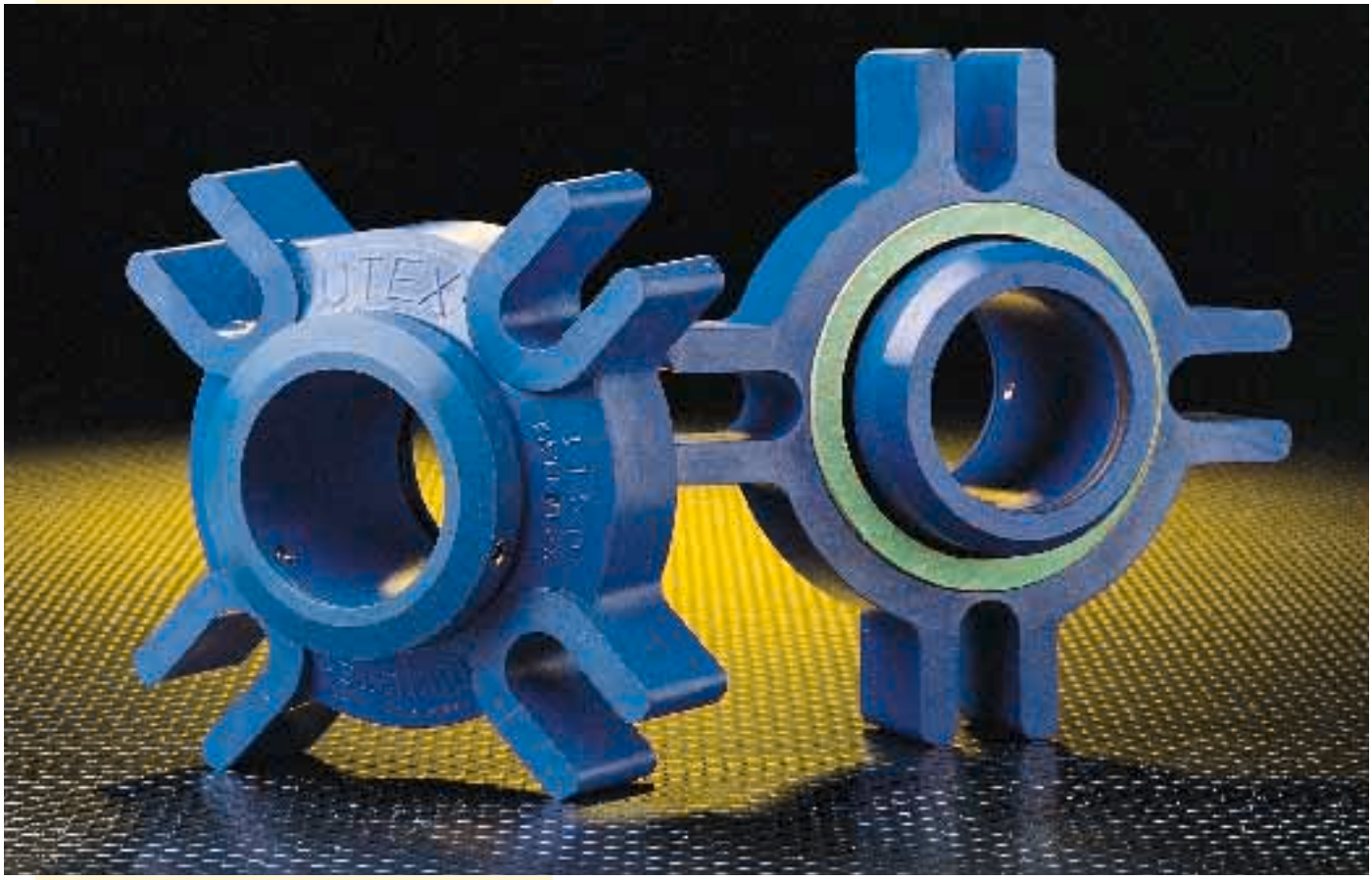
SHAFT SIZE		STUFFING BOX BORE		SEAL O.D.	STUFFING BOX DEPTH (MIN.)	IN-BOARD LENGTH	OUT-BOARD LENGTH	GLAND WIDTH	GLAND O.D.	SLOT WIDTH	BOLT CIRCLE MIN. BY BOLT SIZE		
INCH	MM	MIN.	MAX.								3/8" 10	1/2" 12	5/8" 16
A		B		C	D	E	F	G	H	J	K		
1.000	25	1.625 41.5	1.875 48.0	1.562 39.7	1.718 44	1.609 40.9	2.000 50.8	1.19 30.2	4.11 104.4	.437 11.1	2.750 70		
1.125	28	1.750 44.5	2.000 51.0	1.687 42.9	1.718 44	1.609 40.9	2.000 50.8	1.19 30.2	4.11 104.4	.437 11.1	2.875 73		
1.250	30	1.875 48.0	2.125 54.0	1.812 46.0	1.718 44	1.609 40.9	2.000 50.8	1.19 30.2	4.18 106.2	.437 11.1	3.000 76		
	32	1.875 48.0	2.125 54.0	1.812 46.0	1.718 44	1.609 40.9	2.000 50.8	1.19 30.2	4.18 106.2	.437 11.1	3.000 76		
1.375	33	2.000 51.0	2.250 58.0	1.937 49.2	1.718 44	1.609 40.9	2.000 50.8	1.19 30.2	4.18 106.2	.437 11.1	3.125 79		
	35	2.000 51.0	2.250 58.0	1.937 49.2	1.718 44	1.609 40.9	2.000 50.8	1.19 30.2	4.18 106.2	.437 11.1	3.125 79		
1.500	38	2.250 57.5	2.500 64.0	2.187 55.6	1.937 49	1.828 46.4	2.125 54.0	1.25 31.8	4.49 114.0	.562 14.3	3.375 86	3.500 88	
1.625	40	2.375 60.5	2.625 67.0	2.312 58.7	1.937 49	1.828 46.4	2.125 54.0	1.25 31.8	4.99 126.7	.562 14.3	3.500 89	3.625 91	
1.750	45	2.500 63.5	2.750 70.0	2.437 61.9	2.000 51	1.875 47.6	2.125 54.0	1.25 31.8	5.49 139.4	.562 14.3	3.625 92	3.750 94	
1.875	48	2.625 67.0	2.875 73.0	2.562 65.1	2.000 51	1.875 47.6	2.125 54.0	1.25 31.8	5.49 139.4	.562 14.3	3.750 95	3.875 97	
2.000	50	2.750 70.0	3.000 77.0	2.687 68.3	2.000 51	1.875 47.6	2.125 54.0	1.25 31.8	5.49 139.4	.562 14.3	3.875 98	4.000 100	
2.125		2.875	3.250	2.812	2.000	1.875	2.125	1.25	5.99	.687	4.125	4.250	4.375
2.250	55	3.000 76.5	3.375 86.0	2.937 74.6	2.000 51	1.875 47.6	2.125 54.0	1.25 31.8	5.99 152.1	.687 17.5	4.250 108	4.375 110	4.500 114
2.375	60	3.125 79.5	3.625 93.0	3.062 77.8	2.000 51	1.875 47.6	2.125 54.0	1.25 31.8	6.24 158.5	.687 17.5	4.500 114	4.625 116	4.750 120
2.500		3.250	3.750	3.187	2.000	1.875	2.215	1.25	6.49	.687	4.625	4.750	4.875
2.625	65	3.375 86.0	3.875 99.0	3.312 84.1	2.000 51	1.875 47.6	2.125 54.0	1.25 31.8	6.99 177.5	.687 17.5	4.750 121	4.875 123	5.000 127
2.750	70	3.750 95.5	4.000 105.0	3.625 92.1	2.375 61	2.250 57.2	2.625 66.7	1.50 38.1	7.24 183.9	.687 17.5	5.000 127	5.125 129	5.250 133

METRIC NUMBERS ARE INDICATED IN BOLD RED. STANDARD UTEX SEALS ARE AVAILABLE FOR BOTH INCH AND MILLIMETER SHAFT SIZES LISTED IN COLUMN "A" ABOVE. FOR AVAILABILITY OF SEAL SIZES NOT LISTED IN THE TABLE, CONTACT YOUR UTEX REPRESENTATIVE.





UNILITE®



UNILITE Technical Data

MATERIALS

BASE MATERIAL
Polyphenylene Sulfide Composite.
SPRING
Hastelloy C-276.
STATIONARY FACE
CNFJ-B grade carbon is standard. Tungsten carbide and silicon carbide are available.
ROTATING SEAL FACE
Alpha sintered silicon carbide.
O-RINGS
Viton is standard. Aflas, Nitrile, EPDM, Neoprene, Chemraz and Kalrez are available.

TEMPERATURE	
212°F	100°C
PRESSURE	
200 psi	13.8 bar
SPEED	
2950 fpm	15 m/s

THE ECONOMICAL, LONG LASTING UNILITE FROM UTEX

The Unilite is a unique non-metallic mechanical seal that delivers economy and durability all in a proven design. A metal collar insert protects the composite material when the set screws are tightened, making this a uniquely rugged design for the field. And because it uses no setting clips, this full cartridge seal is simpler to install than previous mechanical seals. Its features include:

- The economy of a non-metallic seal
- Proven polyphenylene sulfide non-metallic composite
- High chemical resistance
- Available with flush on request
- No setting clips required
- Factory repairable

SHAFT SIZE		STUFFING BOX BORE		SEAL O.D.	STUFFING BOX DEPTH (MIN.)	IN-BOARD LENGTH	OUT-BOARD LENGTH	GLAND WIDTH	GLAND O.D.	SLOT WIDTH	BOLT CIRCLE MIN. BY BOLT SIZE		
INCH	MM	MIN.	MAX.								3/8 10	1/2 12	5/8 16
A		B		C	D	E	F	G	H	J	K		
1.000	25	1.625	41.5	1.562	39.7	0.828	21	0.703	17.9	1.578	40.1	1.00	25.4	4.12	104.8	0.437	11.1	2.750	70		
1.125	28	1.750	44.5	2.000	51.0	1.687	42.8	0.828	21	0.703	17.9	1.578	40.1	1.00	25.4	4.12	104.8	0.437	11.1	2.875	73		
1.250	30	1.875	48.0	2.125	54.0	1.812	46.0	0.828	21	0.703	17.9	1.578	40.1	1.00	25.4	4.25	108.0	0.437	11.1	3.000	76		
	32	1.875	48.0	2.125	54.0	1.812	46.0	0.828	21	0.703	17.9	1.578	40.1	1.00	25.4	4.25	108.0	0.437	11.1	3.000	76		
1.375	35	2.000	51.0	2.250	58.0	1.937	49.2	0.828	21	0.703	17.9	1.578	40.1	1.00	25.4	4.25	108.0	0.437	11.1	3.125	79		
1.500	38	2.250	57.5	2.500	64.0	2.187	55.6	0.844	22	0.719	18.3	1.719	43.7	1.14	29.0	4.50	114.3	0.437	11.1	3.375	86		
	40	2.312	59.0	2.562	66.0	2.250	57.2	0.844	22	0.719	18.3	1.179	43.7	1.14	29.0	5.00	127.0	0.562	14.3	3.437	87	3.562	89
1.625		2.375		2.625		2.312		0.844		0.719		1.719		1.14		5.00		0.562		3.500		3.625	
1.750	45	2.500	63.5	2.750	70.0	2.437	61.9	0.844	22	0.719	18.3	1.719	43.7	1.14	29.0	5.50	139.7	0.562	14.3	3.625	92	3.750	94
1.875		2.625		2.875		2.562		0.844		0.719		1.719		1.14		5.50		0.562		3.750		3.875	
2.000	50	2.750	70.0	3.000	77.0	2.687	68.3	0.844	22	0.719	18.3	1.719	43.7	1.14	29.0	5.50	139.7	0.562	14.3	3.875	98	4.000	100
2.125		2.875		3.125		2.812		0.844		0.719		1.719		1.14		6.00		0.687		4.000		4.125		4.250	
	55	2.937	75.0	3.187	81.0	2.875	73.0	0.844	22	0.719	18.3	1.719	43.7	1.14	29.0	6.00	152.4	0.687	17.5	4.062	103	4.187	105	4.312	109
2.250		3.000		3.250		2.937		0.844		0.719		1.719		1.14		6.00		0.687		4.125		4.250		4.375	
2.375	60	3.125	79.5	3.375	86.0	3.062	77.8	0.844	22	0.719	18.3	1.719	43.7	1.14	29.0	6.00	152.4	0.687	17.5	4.250	108	4.375	110	4.500	114
2.500		3.250		3.500		3.187		0.844		0.719		1.719		1.14		6.50		0.687		4.375		4.500		4.625	
2.625	65	3.375	86.0	3.625	93.0	3.312	84.1	0.844	22	0.719	18.3	1.719	43.7	1.14	29.0	6.50	165.1	0.687	17.5	4.500	114	4.625	116	4.750	120

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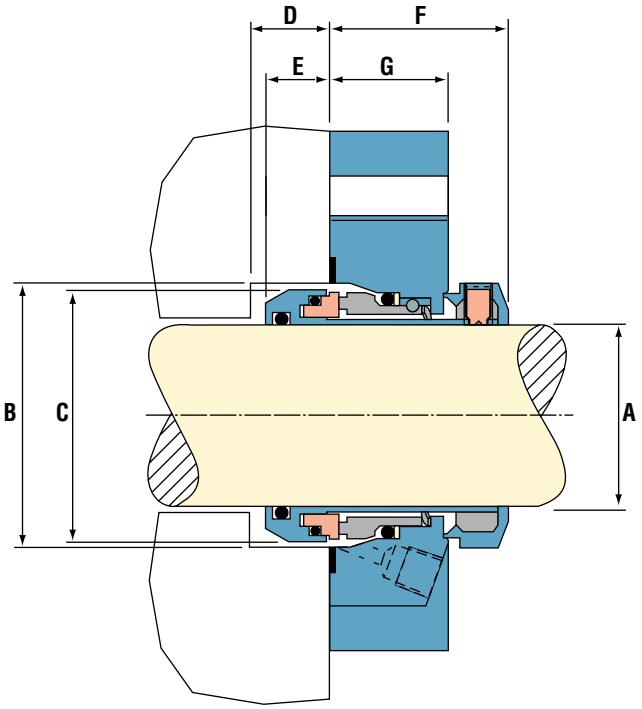
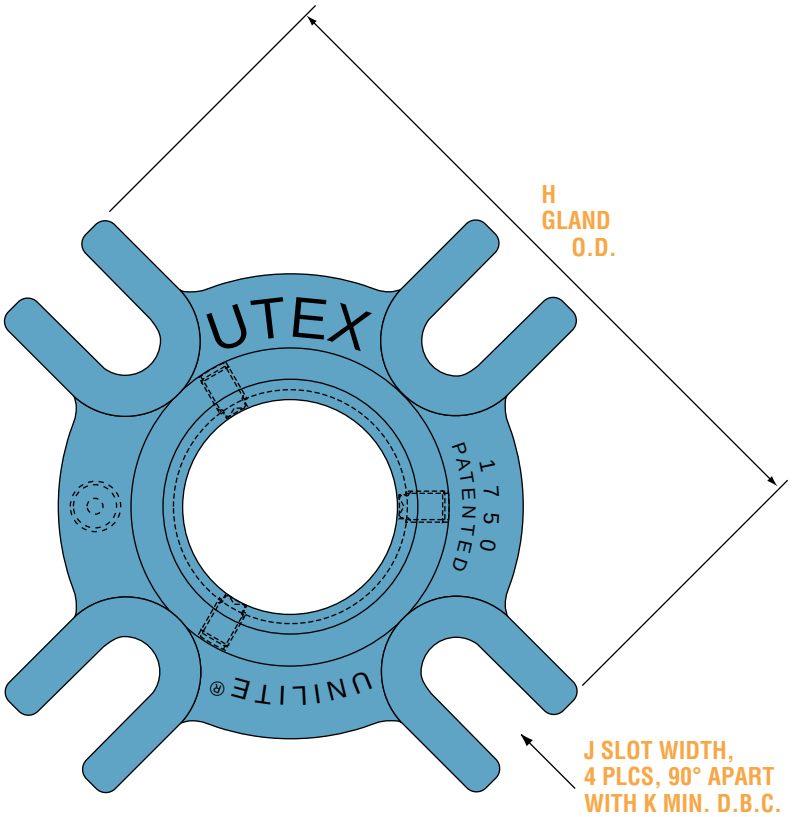
TYPICAL MECHANICAL PROPERTIES OF UNILITE COMPOSITE SEAL POLYPHENYLENE SULFIDE COMPOSITE			
Tensile strength	ASTM D638	22,000 psi	155MPa
Ultimate elongation	ASTM D638	1%	1%
Flexural strength	ASTM D790	36,000 psi	248 MPa
Flexural modulus	ASTM D790	2,000,000 psi	14 GPa
Notched IZOD	ASTM D256	4 ft-lb/in	212 J/M
HDT @ 264 psi (1.82 MPa)	ASTM D648	500°F	260°C





UTEX “MB”

“MB” Technical Data

MATERIALS

METAL COMPONENTS (MB)
Hastelloy C-276 bellows core 316SS end fittings.

METAL COMPONENTS (MBH)
All Hastelloy C-276

SEAL FACE
CNFJ-B grade carbon is standard. Tungsten carbide and silicon carbide are available.

O-RINGS
Viton is standard. EPDM, Neoprene, Nitrile, Aflas, Chemraz, Kalrez, PTFE and encapsulated Viton are available.

TEMPERATURE
-75°F to 450°F -60°C to 232°C
depending on o-ring material chosen.

PRESSURE
OPERATING: Up to 300 psi (20 bar)
STATIC: Up to 350 psi (24 bar)
Dependent upon seal size.

SPEED
Up to 4500 fpm (23 m/s).

The UTEX “MB” metal bellows seal provides unitized construction with superior nestled ripple bellows design. It is designed for applications involving more viscous fluids, such as mud pumps, compressor gas seals, and crude oil handling.

Standard materials are 316 stainless steel end fittings with a Hastelloy C bellows core. All Hastelloy C construction is also available. A carbon face is standard, and tungsten or silicon carbide faces are optional.

The static o-ring seal eliminates shaft or sleeve fretting. The welded bellows core provides 360° face loading to reduce vibration and frictional heat. This integrally balanced seal handles pressure from vacuum to 300 psi. The seal remains clean running because of the rotating bellows which generates a centrifugal force to expel abrasives.

UTEX “MB” seals are available in 15/16" through 4" sizes. Consult UTEX for specific design application information.

SEAL/ SHAFT SIZE		SEAL O.D.		INSTALLED LENGTH		O-RING		SET SCREW SIZE x LENGTH	
INCH	MM								
A		B		C					
	25	1.562	39.7	1.181	30.0		-120		M5-0.8X6
1.000		1.562		1.250		-120		10-24 x 1/4	
1.125	28	1.687	42.8	1.250	32.4	-122	-122	10-24 x 1/4	M5-0.8x6
	30	1.687	42.8	1.279	32.4		-123		M5-0.8x6
1.250		1.812		1.375		-124		1/4-20 x 1/4	
	32	1.812	46.0	1.279	32.4		-124		M5-0.8x6
	33	1.812	46.0	1.279	32.4		-125		M5-0.8x6
1.375		1.937		1.375		-126		1/4-20 x 1/4	
	35	1.937	49.2	1.279	32.4		-126		M5-0.8x6
	38	2.062	52.4	1.339	34.0		-128		M6-1.0x7
1.500		2.062		1.375		-128		1/4-20 x 1/4	
	40	2.187	55.6	1.339	34.0		-129		M6-1.0x7
1.625		2.187		1.375		-130		1/4-20 x 1/4	
	43	2.312	58.7	1.339	34.0		-131		M6-1.0x7
1.750		2.312		1.375		-132		1/4-20 x 1/4	
	45	2.312	58.7	1.339	34.0		-132		M6-1.0x7
1.875		2.437		1.500		-225		1/4-20 x 1/4	
	48	2.437	61.9	1.339	34.0		-134		M6-1.0x7
	50	2.562	65.1	1.358	34.4		-226		M6-1.0x7
2.000		2.562		1.500		-226		1/4-20 x 1/4	
	53	2.687	68.2	1.358	34.4		-227		M6-1.0x7
2.125		2.687		1.500		-227		1/4-20 x 1/4	
	55	2.812	71.4	1.358	34.4		-227		M6-1.0x7
2.250		2.812		1.500		-228		1/4-20 x 1/4	
	60	2.937	74.6	1.555	39.5		-229		M6-1.0x7
2.375		2.937		1.500		-229		1/4-20 x 1/4	
	63	3.187	81.0	1.555	39.5		-230		M6-1.0x8
2.500		3.187		1.625		-230		1/4-20 x 5/16	
	65	3.312	84.1	1.555	39.5		-231		M6-1.0x8
2.625		3.312		1.625		-231		1/4-20 x 5/16	
2.750		3.437		1.625		-232		1/4-20 x 5/16	
	70	3.437	87.3	1.750	44.4		-232		M6-1.0x8
2.875		3.625		1.625		-233		1/4-20 x 3/8	
3.000		3.750		1.625		-234		1/4-20 x 3/8	
	75	3.750	95.3	1.750	44.4		-234		M6-1.0x10
3.125	80	3.875	98.4	1.750	44.4	-235	-235	1/4-20 x 3/8	M6-1.0x10
3.250		4.000		1.750		-236		1/4-20 x 3/8	
3.375	85	4.125	104.8	1.750	44.4	-237	-237	1/4-20 x 3/8	M6-1.0x10
3.500	90	4.250	108.0	1.750	44.4	-238	-238	1/4-20 x 3/8	M6-1.0x10
3.625		4.375		1.750		-239		1/4-20 x 3/8	
3.750	95	4.500	114.3	1.750	44.4	-240	-240	1/4-20 x 3/8	M6-1.0x10
3.875		4.625		1.750		-241		1/4-20 x 3/8	
4.000	100	4.750	120.7	1.750	44.4	-242	-242	1/4-20 x 3/8	M6-1.0x10
4.125	105	4.875	123.8	1.750	44.4	-243	-243	1/4-20 x 3/8	M6-1.0x10
4.250	110	5.000	127.0	1.750	44.4	-244	-245	1/4-20 x 3/8	M6-1.0x10

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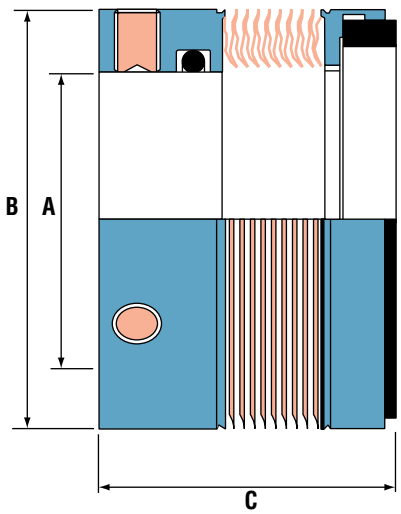
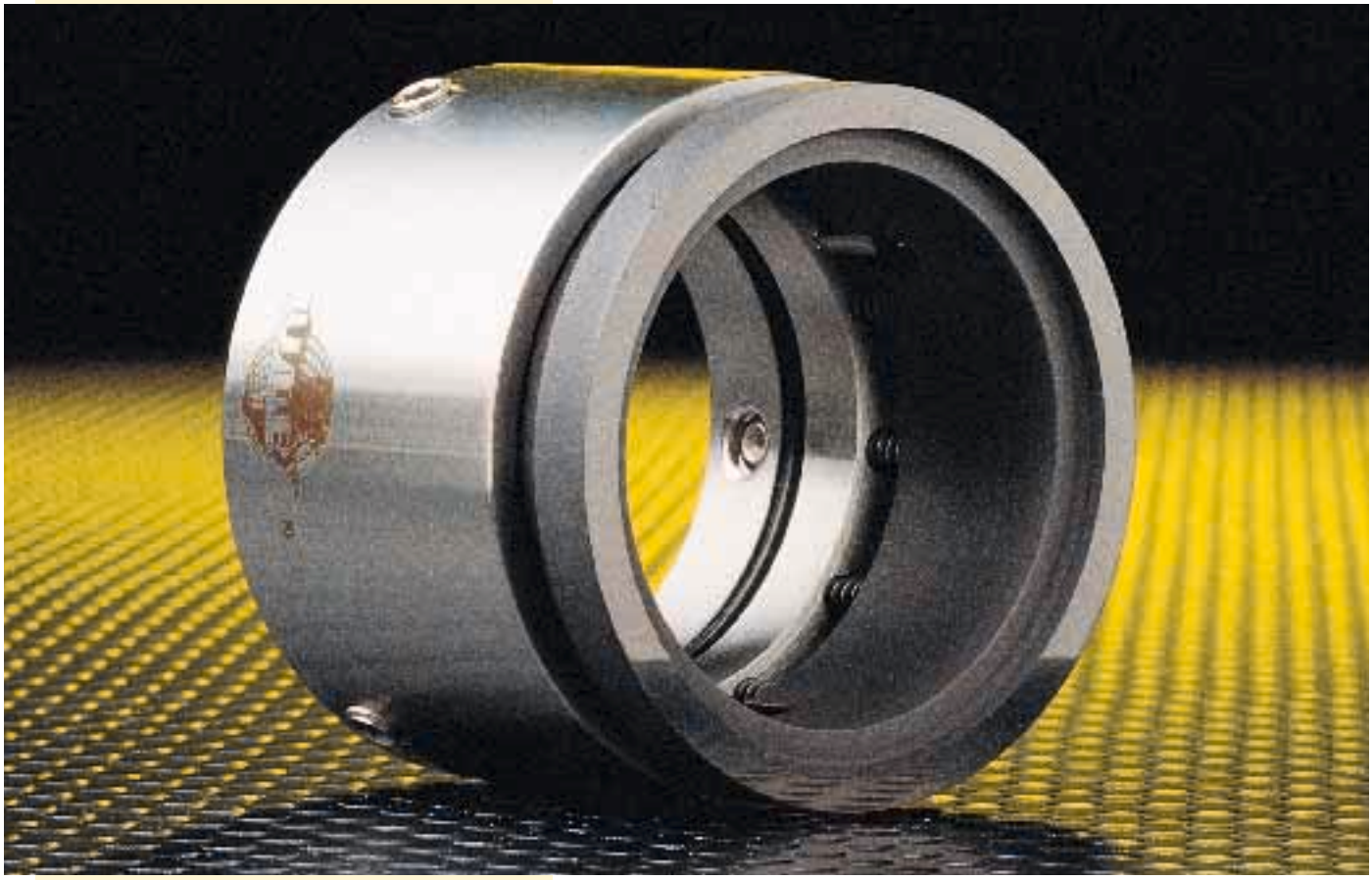


UTEX “MP”



“MP” Technical Data

MATERIALS

METAL COMPONENTS
316 stainless steel is standard.

SEAL FACE
CNFJ-B grade carbon is standard. Silicon carbon and special grade carbon are also available.

O-RINGS
Viton, Aflas, Nitrile, EPDM, Neoprene, Chemraz and Kalrez.

TEMPERATURE

-60°F to +400°F	-50°C to +204°C

PRESSURE:

450 psi	31 bar

SPEED:

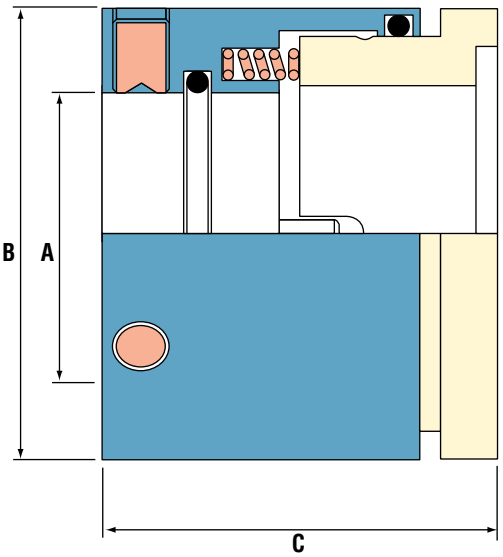
3940 fpm	20 m/s

The UTEX “MP” is a straight-line, pressure-balanced seal for handling anything from clean water to crude oil. The design features springs that are isolated from the product to prevent clogging and fatigue. No sliding elastomers are used that could create shaft or sleeve fretting. Solid carbon faces are used, eliminating the need for shrink fits and allowing easy in-plant repairs.

This seal has a slim line design that fits AVS and ANSI pumps. The seal’s integral balance does not require stepped shafts or sleeves and can be used at operating pressures of 0 to 450 psi. UTEX “MP” seals are available through 6" sizes. Consult UTEX for specific design application information.

SEAL/ SHAFT SIZE INCH	MM	SEAL O.D.		INSTALLED LENGTH		SHAFT O-RING		CARBON O-RING		SET SCREW SIZE x LENGTH	
A		B		C							
.937		1.500		1.750		-119		-124		1/4 - 20 x 1/4	
	25	1.547	39.3	1.375	34.9	-120		-[1]125			M5-0.8x6
1.000		1.562		1.750		-120		-125		1/4 - 20 x 1/4	
	28	1.664	42.3	1.375	34.9	-122		-[1]127			M5-0.8x6
1.125		1.687		1.750		-122		-127		1/4 - 20 x 1/4	
	30	1.743	44.3	1.375	34.9	-123		-128			M5-0.8x6
1.187		1.750		1.750		-123		-128		1/4 - 20 x 1/4	
1.250	32	1.812	46.0	1.750	44.4	-124	-124	-129	-129	1/4 - 20 x 1/4	M6-1.0x7
	33	1.861	47.3	1.750	44.4	-125		-130			M6-1.0x7
1.375		1.937		1.750		-126		-131		1/4 - 20 x 1/4	
	35	1.929	49.0	1.750	44.4	-126		-131			M6-1.0x7
1.500	38	2.062	52.4	1.750	44.4	-128	-128	-133	-133	1/4 - 20 x 1/4	M6-1.0x7
1.562	40	2.187	55.6	1.750	44.4	-129	-129	-135	-135	1/4 - 20 x 5/16	M6-1.0x7
1.625		2.250		1.750		-130		-136		1/4 - 20 x 5/16	
1.687	42	2.312	58.7	1.750	44.4	-131	-131	-137	-137	1/4 - 20 x 5/16	M6-1.0x7
	43	2.312	58.7	1.750	44.4	-131		-137			M6-1.0x7
1.750	45	2.375	60.3	1.750	44.4	-132	-132	-138	-138	1/4 - 20 x 5/16	M6-1.0x7
1.875	48	2.500	63.5	1.750	44.4	-134	-134	-140	-140	1/4 - 20 x 5/16	M6-1.0x7
2.000	50	2.625	66.7	1.750	44.4	-136	-136	-142	-142	1/4 - 20 x 5/16	M6-1.0x7
2.125	53	2.750	69.8	1.750	44.4	-138	-138	-144	-144	1/4 - 20 x 5/16	M6-1.0x7
	55	2.750	69.8	1.750	44.4	-139		-144			M6-1.0x7
2.250		2.875		1.750		-140		-146		1/4 - 20 x 5/16	
2.375	60	3.000	76.2	1.750	44.4	-142	-142	-148	-148	1/4 - 20 x 5/16	M6-1.0x7
2.500	63	3.125	79.4	1.750	44.4	-144	-144	-150	-150	1/4 - 20 x 5/16	M6-1.0x7
2.625	65	3.250	82.6	1.750	44.4	-146	-145	-151	-151	1/4 - 20 x 5/16	M6-1.0x7
2.750	70	3.375	85.7	1.750	44.4	-148	-148	-152	-152	1/4 - 20 x 5/16	M6-1.0x7
2.875		3.500		1.750		-150		-152		1/4 - 20 x 5/16	
3.000	75	3.812	96.8	1.750	44.4	-234	-234	-238	-238	1/4 - 20 x 3/8	M6-1.0x10
3.125		3.937		1.750		-235		-239		1/4 - 20 x 3/8	
3.250	80	4.062	103.2	1.750	44.4	-236	-235	-240	-240	1/4 - 20 x 3/8	M6-1.0x10
3.375	85	4.187	106.4	1.750	44.4	-237	-237	-241	-241	1/4 - 20 x 3/8	M6-1.0x10
3.500	90	4.312	109.5	1.750	44.4	-238	-238	-242	-242	1/4 - 20 x 3/8	M6-1.0x10
3.625		4.437		1.750		-239		-243		1/4 - 20 x 3/8	
3.750	95	4.562	115.9	1.750	44.4	-240	-240	-244	-244	1/4 - 20 x 3/8	M6-1.0x10
3.875		4.687		1.750		-241		-245		1/4 - 20 x 3/8	
4.000	100	4.812	122.2	1.750	44.4	-242	-242	-246	-246	1/4 - 20 x 3/8	M6-1.0x10
4.125	105	4.937	125.4	2.250	57.2	-243	-243	-247	-247	5/16 - 18 x 3/8	M8-1.25x10
4.250		5.062		2.250		-244		-248		5/16 - 18 x 3/8	
4.375	110	5.187	131.8	2.250	57.2	-245	-245	-249	-249	5/16 - 18 x 3/8	M8-1.25x10
4.500		5.312		2.250		-246		-250		5/16 - 18 x 3/8	
4.625		5.437		2.250		-247		-251		5/16 - 18 x 3/8	
4.750		5.562		2.250		-248		-252		5/16 - 18 x 3/8	
4.875		5.687		2.250		-249		-253		5/16 - 18 x 3/8	
5.000		5.812		2.250		-250		-254		5/16 - 18 x 3/8	
5.125		5.937		2.250		-251		-255		5/16 - 18 x 3/8	
5.250		6.062		2.250		-252		-256		5/16 - 18 x 3/8	
5.375		6.187		2.250		-253		-257		5/16 - 18 x 3/8	
5.500		6.312		2.250		-254		-258		5/16 - 18 x 3/8	
5.625		6.437		2.250		-255		-259		5/16 - 18 x 3/8	
5.750		6.562		2.250		-256		-259		5/16 - 18 x 3/8	
5.875		6.687		2.250		-257		-260		5/16 - 18 x 3/8	
6.000		6.812		2.250		-258		-260		5/16 - 18 x 3/8	

METRIC NUMBERS ARE INDICATED IN BOLD RED. STANDARD UTEX SEALS ARE AVAILABLE FOR BOTH INCH AND MILLIMETER SHAFT SIZES LISTED IN COLUMN "A" ABOVE. FOR AVAILABILITY OF SEAL SIZES NOT LISTED IN THE TABLE, CONTACT YOUR UTEX REPRESENTATIVE.



UTEX “CO”

“CO” Technical Data

MATERIALS

METAL COMPONENTS
316 stainless steel is standard.

SEAL FACE
CNFJ-B grade carbon is standard. Glass filled PTFE and special grade carbon are also available.

O-RINGS
Viton, Aflas, Nitrile, EPDM, Neoprene, Chemraz and Kalrez.

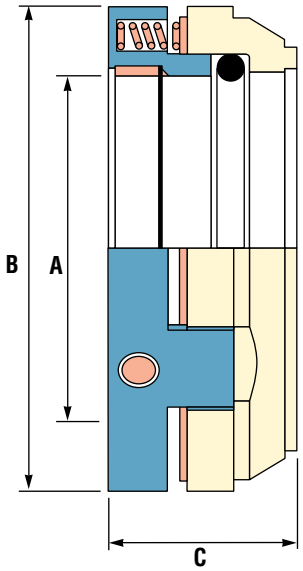
TEMPERATURE
-60°F to +400°F -50°C to +204°C

PRESSURE:
150 psi 10 bar

SPEED
2950 fpm 15 m/s

SEAL/ SHAFT SIZE INCH	MM	SEAL O.D.		INSTALLED LENGTH		O-RING		SET SCREW SIZE x LENGTH	
A		B		C					
1.000	**24**	2.000	**50.8**	1.500	**38.1**	-318	**-317**	1/4 - 20 x 3/8	**M6-1.0x10**
	25	2.000	**50.8**	1.500	**38.1**		**-318**		**M6-1.0x10**
1.125	**28**	2.125	**54.0**	1.500	**38.1**	-320	**-320**	1/4 - 20 x 3/8	**M6-1.0x10**
1.250	**30**	2.250	**57.2**	1.500	**38.1**	-322	**-321**	1/4 - 20 x 3/8	**M6-1.0x10**
	32	2.250	**57.2**	1.500	**38.1**		**-322**		**M6-1.0x10**
1.375	**33**	2.375	**60.3**	1.500	**38.1**	-324	**-323**	1/4 - 20 x 3/8	**M6-1.0x10**
	35	2.375	**60.3**	1.500	**38.1**		**-324**		**M6-1.0x10**
1.500	**38**	2.500	**63.5**	1.500	**38.1**	-325	**-325**	1/4 - 20 x 3/8	**M6-1.0x10**
1.625	**40**	2.625	**66.7**	1.500	**38.1**	-326	**-326**	1/4 - 20 x 3/8	**M6-1.0x10**
1.750	**42**	2.750	**69.9**	1.500	**38.1**	-327	**-326**	1/4 - 20 x 3/8	**M6-1.0x10**
	43	2.750	**69.9**	1.500	**38.1**		**-327**		**M6-1.0x10**
	45	2.750	**69.9**	1.500	**38.1**		**-327**		**M6-1.0x10**
1.875	**48**	2.875	**73.0**	1.500	**38.1**	-328	**-328**	1/4 - 20 x 3/8	**M6-1.0x10**
2.000	**50**	3.000	**76.2**	1.500	**38.1**	-329	**-329**	1/4 - 20 x 3/8	**M6-1.0x10**
2.125	**53**	3.125	**79.4**	1.500	**38.1**	-330	**-330**	1/4 - 20 x 3/8	**M6-1.0x10**
2.250	**55**	3.250	**82.6**	1.500	**38.1**	-331	**-330**	1/4 - 20 x 3/8	**M6-1.0x10**
2.375	**60**	3.375	**85.7**	1.500	**38.1**	-332	**-332**	1/4 - 20 x 3/8	**M6-1.0x10**
2.500	**63**	3.500	**88.9**	1.500	**38.1**	-333	**-333**	1/4 - 20 x 3/8	**M6-1.0x10**
2.625	**65**	3.625	**92.1**	1.500	**38.1**	-334	**-334**	1/4 - 20 x 3/8	**M6-1.0x10**
2.750	**70**	3.875	**98.4**	1.500	**38.1**	-335	**-335**	5/16 - 18 x 7/16	**M8-1.25x12**
2.875		4.000		1.500		-336		5/16 - 18 x 7/16	
3.000	**75**	4.125	**104.8**	1.500	**38.1**	-337	**-337**	5/16 - 18 x 7/16	**M8-1.25x12**
3.125		4.250		1.500		-338		5/16 - 18 x 7/16	
3.250	**80**	4.375	**111.1**	1.500	**38.1**	-339	**-338**	5/16 - 18 x 7/16	**M8-1.25x12**
3.375	**85**	4.500	**114.3**	1.500	**38.1**	-340	**-340**	5/16 - 18 x 7/16	**M8-1.25x12**
3.500		4.625		1.500		-341		5/16 - 18 x 7/16	
3.625	**90**	4.750	**120.7**	1.500	**38.1**	-342	**-341**	5/16 - 18 x 7/16	**M8-1.25x12**
3.750	**95**	4.875	**123.8**	1.500	**38.1**	-343	**-343**	5/16 - 18 x 7/16	**M8-1.25x12**
3.875		5.000		1.500		-344		5/16 - 18 x 7/16	
4.000	**100**	5.125	**130.2**	1.500	**38.1**	-345	**-345**	5/16 - 18 x 7/16	**M8-1.25x12**

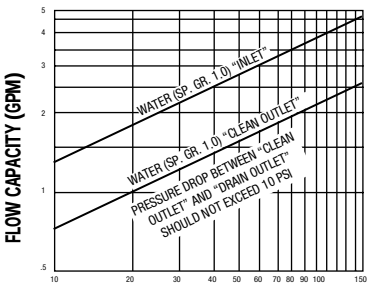
METRIC NUMBERS ARE INDICATED IN BOLD RED. STANDARD UTEX SEALS ARE AVAILABLE FOR BOTH INCH AND MILLIMETER SHAFT SIZES LISTED IN COLUMN “A” ABOVE. FOR AVAILABILITY OF SEAL SIZES NOT LISTED IN THE TABLE, CONTACT YOUR UTEX REPRESENTATIVE.



The UTEX “CO” seal is an outside mounted seal with a unique design ideally suited for most chemical applications. “CO” seals operate with no wetted metal parts for increased chemical resistance. It is available with Aflas o-rings to handle most chemical applications and temperature ranges. The springs are isolated from the product to prevent clogging and to further enhance the seal’s chemical resistance.

This seal is externally balanced for pressures up to 150 psi and comes standard with a split clamping ring ideal for ceramic shafts. “CO” seals are available in 1" through 4" sizes. Consult UTEX for specific design application information.

FLOW RATES



Note: For optimum results, pressure differential between feed and discharge should be between 20 psi (min) and 125 psi (max)

EFFICIENCY CHART

PARTICLE SIZE	PRESSURE DIFFERENTIAL	% REMOVAL
SAND	20 psi	100%
SAND	100 psi	100%
15 MICRON	20 psi	96%
15 MICRON	100 psi	99%
5 MICRON	20 psi	89%
5 MICRON	100 psi	96%
2.5 MICRON	20 psi	68%
2.5 MICRON	100 psi	87%

MAINSTRAINER

The UTEX Mainstrainer uses no filter elements that could clog or fail. Its centrifugal filtering effectively separates solids from seal flush liquids by causing the solids to be expelled to the cone wall and downward to the outlet where they are drawn to a low pressure area. The clean liquid is directed to the seal area. Tests have proven its ability to remove particles of various sizes.

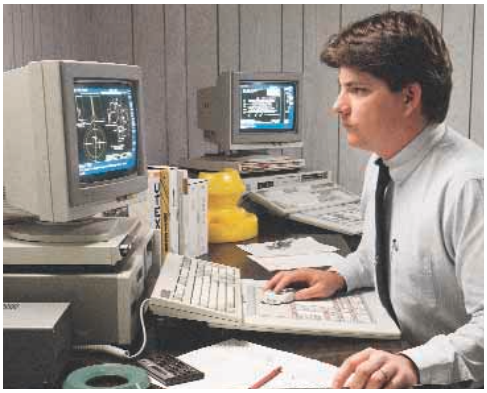
Total flow through top and bottom outlets will equal inlet flow. However, because of pressure differentials between the seal area and suction area, orifices may be necessary to control liquid flow. All inlets and outlets are 1/2" N.P.T.

ENGINEERED SEALS

UTEX offers many years of experience in designing and manufacturing mechanical seals for a broad spectrum of industries.

Using CAD/CAM technology, we design and manufacture our own products and maintain a large inventory of standard and custom designed products. Our years of experience and engineering expertise give us the know-how to handle pumping problems whether it takes a simple balance modification or an entire custom engineered seal. This gives our customers the option of ordering high quality seals for highly specialized applications while maintaining cost efficient economies.

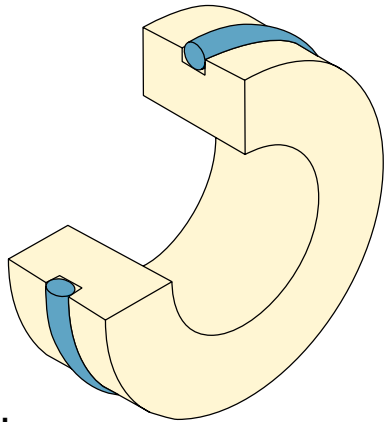
We have the flexibility to design custom seals and associated parts for high temperature applications, corrosive material service, for high durability operating requirements and for handling all types of fluids. It is a total sealing technology capability that UTEX offers.



UTEX's computerized design and engineering capabilities help us meet customers' changing needs.

SEATS

The correct choice of seat material and design is critical to the success of a seal installation. UTEX has developed a wide selection of seat designs to satisfy sealing requirements. Using tungsten carbide, silicon carbide, alox, Ni-Resist or other customer specified materials, UTEX will match the correct seat to the seal operating conditions. O-ring, L-type, Clamp-type and others are all manufactured to exacting tolerances. Contact UTEX for your specific requirements.



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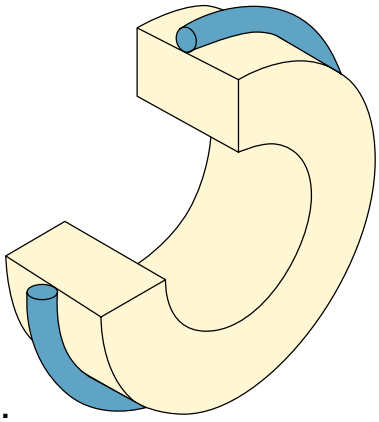

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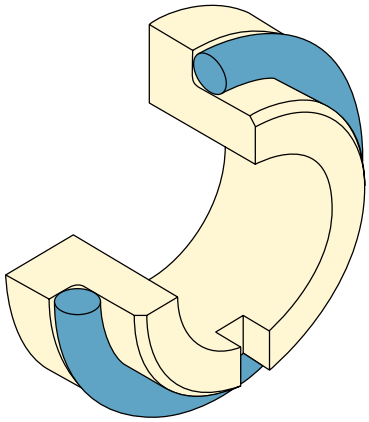

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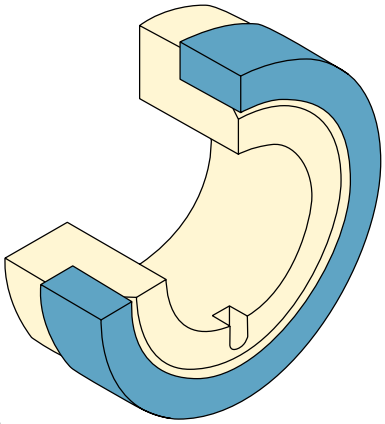

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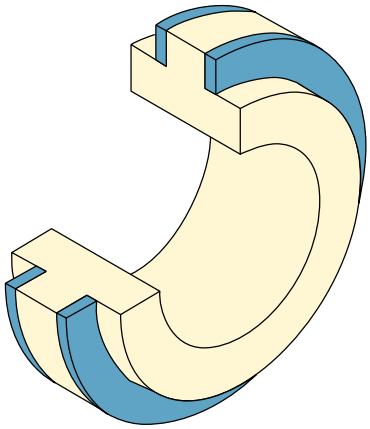

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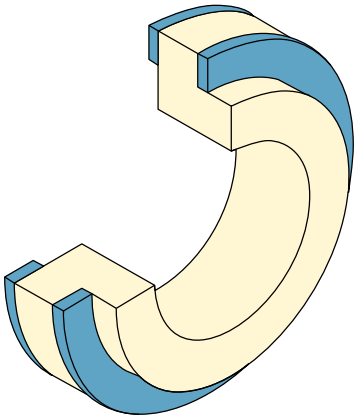

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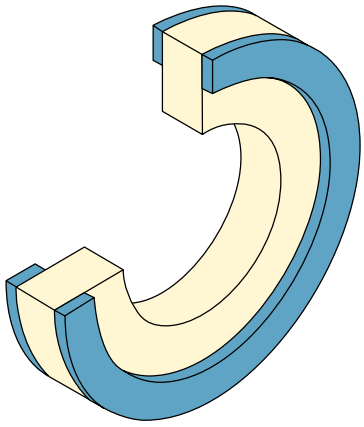


7.

1. O-ring seat. For a wide range of general service applications. Various o-ring elastomers may be used to improve chemical resistance.

2. Square section seat. A widely used seat configuration, it can be furnished with various o-ring materials to match pump conditions.

3. Floating seat. Available for those glands requiring “L” section seats. They are furnished with anti-rotation slots and various o-ring elastomers.

4. Modified “L” section seat. Similar to floating seat but furnished with a PTFE gasket and anti-rotation slots as standard. Provides increased chemical resistance.

5. T-type clamped seat. Provides wide temperature and pressure services. Clamped between the stuffing box face and gland. Furnished with two gaskets, one PTFE and one non-asbestos.

6. L-type clamped seat. Standard clamped type seat that has been modified to fit pumps requiring this configuration. Furnished with two gaskets, one PTFE and one non-asbestos.

7. Modified clamped type seat. Standard clamped type seat that has been modified to fit pumps requiring this configuration. Furnished with two gaskets, one PTFE and one non-asbestos.

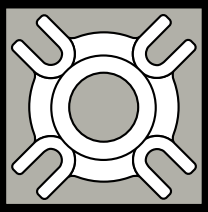
All UTEX seats are available in tungsten carbide, silicon carbide, alox and Ni-Resist, depending on customers’ pumping requirements.

UTEX INDUSTRIES, INC.

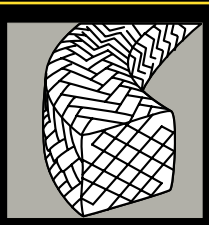
Taking Sealing Technology Beyond Tomorrow

ISO 9001 Certified *

*World Headquarters: 10810 Old Katy Road • Houston, Texas 77043 • 713-467-1000 • 800-359-9229
*Houston Service Center: 5989 South Loop East • Houston, Texas 77033 • 713-649-3421 • 888-883-7579
*Weimar: 605 UTEX Drive • Weimar, Texas 78962 • 979-725-8503 • 877-469-2829
*Odessa Service Center: 1104 Market Avenue • Odessa, Texas 79761 • 915-333-4151 • 800-873-0946
Applied Rubber Technology, Inc.: 116-A Industrial Court • Conroe, Texas 77301 • 936-760-4100
San Benito: 2001 UTEX Drive • San Benito, Texas 78586 • 956-399-7771
AccuSeal: 1777 Upland, Suite 103 • Houston, Texas 77043 • 832-358-0350

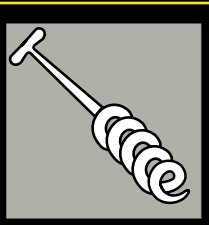


Mechanical Seals

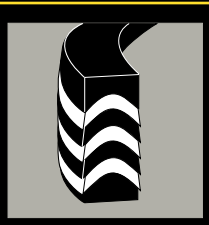


Compression Packing

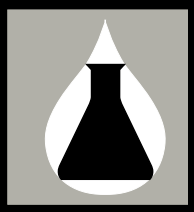
Sheet Packing



Packing Tools



Molded Products



Industrial Chemicals

08/02/PDF

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