



Administration Headquarters



50,000m² Manufacturing Plant and Logistics Center



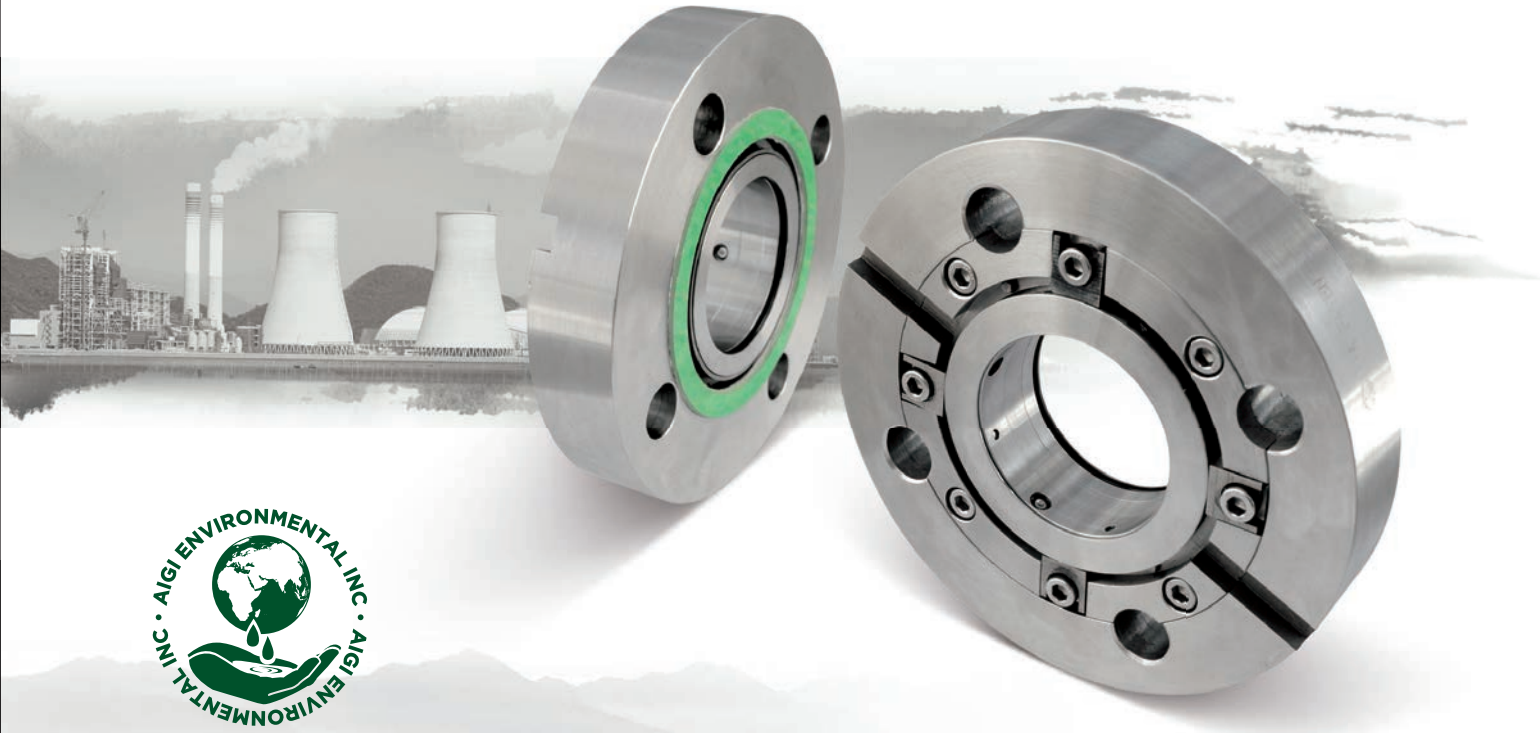
AIGI ENVIRONMENTAL INCORPORATED

— A Subsidiary of AIGI Industrial Group —

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INNOVATIVE FLAT FACE MECHANICAL SEAL



GENERAL MECHANICAL SEAL



SLURRY CARTRIDGE MECHANICAL SEAL

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Innovative Flat Face Sealing Technology

Patented AIGI FFA Flat Face Seal

Packing—To—Seal Conversion Made Easy

Converting from Mechanical Packing to Mechanical seal should be easy but there are several critical factors which complicate the process.

• **Feature 1: No need to Measure**

To fit the patented FFA all required dimensions are easily measurable. (shaft diameter, axial length available, radial diameter available)

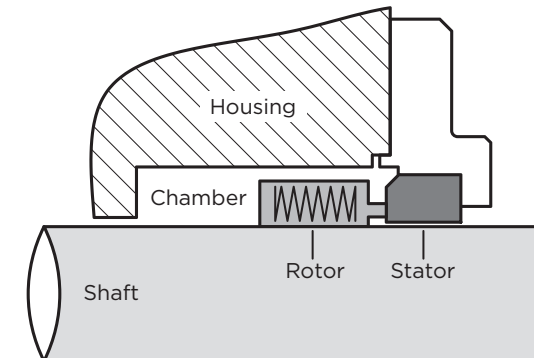
• **Feature 2: Easy to Fit and Install**

Because the FFA sits outside the stuffing box there are no issues with installation. Its balanced, stationary design provides all of the benefits of easy to use and install cartridge seals.

The patented FFA is one of the most compact outside seals available making packing to seal conversion in limited axial space applications possible.

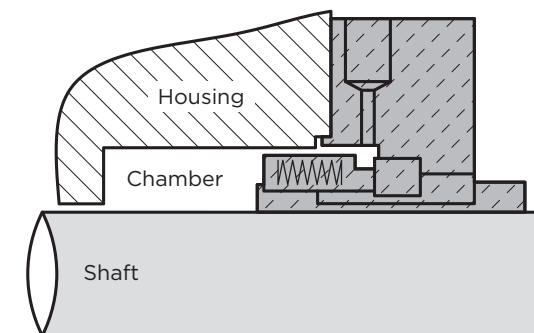
• **Feature 3: Better for Cooling**

Being an outside seal, the Patented FFA has been designed with the maximum space around the seal faces for cooling, flushing and fluid flow.



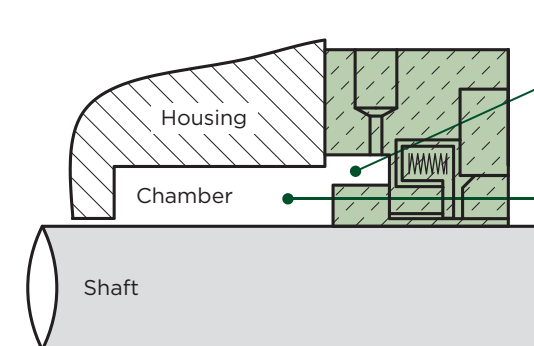
Component Seal Install

Size measurement of chamber depth and cross section is required



Cartridge Seal Install

Size measurement of chamber depth and cross section is required



Sealing chamber is larger than Stuffing box



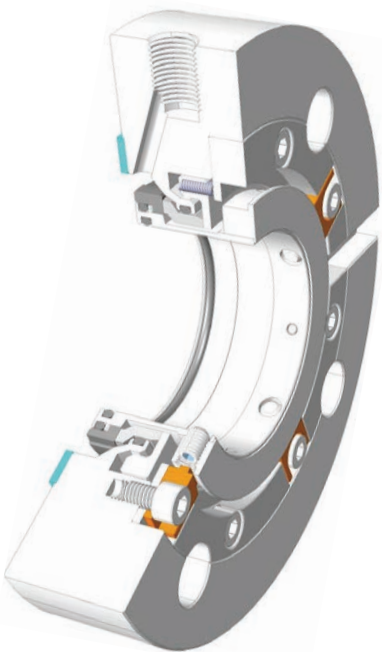
Installed entirely outside of stuffing box.
No need to measure



FFA Cartridge Seal Install

• **Feature 4: Great Stability**

Being an outside seal, the patented FFA sits closer to the bearing box than traditional cartridge seals. This configuration provides more stability and less vibration for the seal.



 Patented AIGI FFA Flat Face Seal

Design Features

- Suitable for limited outboard space applications
 - Away from shaft wear/fretting
- Sealing chamber large than original stuffing box
 - Good heat radiation and cooling ability
- Positioned closer to the bearing
 - Lower vibration and better sealing

Application

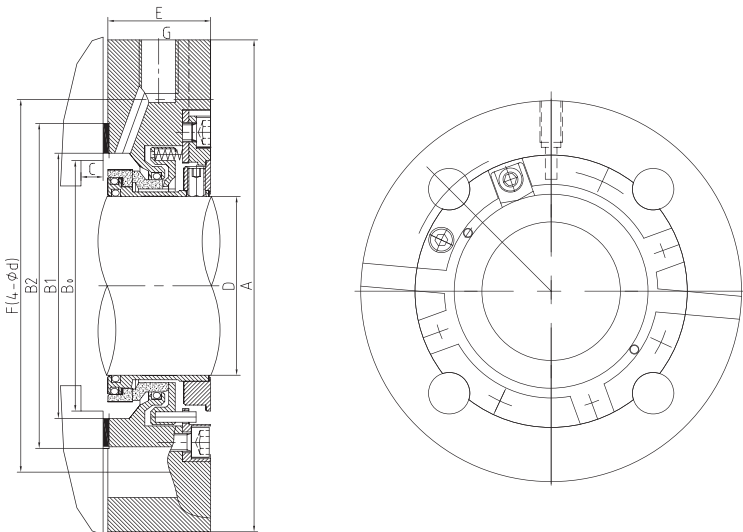
- Water, oil and other general use application, especially designed for limited sealing space

Operating Limits

Max. Pressure	15kg/cm ² (200 PSI)
Max. Temperature	120°C (250°F)
Max. Speed	20m/s (4000 Ft/min)

Standard Materials

Metal Part	304SS
Seal Faces	CB, SC, TC
Spring	HastelloyC
O-ring	FKM, EP, NBR
Gland Configuration	Flush Only (Quench/Drain Optional)



AIGI FFA Sizes Data

Unit: mm

D	A	E Min.	F	d	B1	B2	G
30	113	34	93	14	57	77	1/8"
35	118	34	98	14	62	82	1/8"
40	123	34	103	14	67	87	1/4"
45	128	34	108	14	72	92	1/4"
50	133	34	113	14	77	97	1/4"
55	160	36	120	17	84	104	1/4"
60	165	36	125	17	89	109	1/4"
65	170	36	130	17	94	114	1/4"
70	175	36	135	17	99	119	1/4"
75	185	42	145	17	107	128	3/8"
80	190	42	150	17	112	133	3/8"
85	195	42	155	17	117	138	3/8"
90	200	42	164	21	122	143	3/8"
95	222	46	180	21	127	157	3/8"
100	227	46	185	21	132	162	3/8"
105	232	48	190	21	137	167	3/8"
110	237	48	195	21	142	172	3/8"
115	242	48	200	21	147	177	3/8"
120	247	48	205	21	152	182	3/8"

AIGI FFA Sizes Data

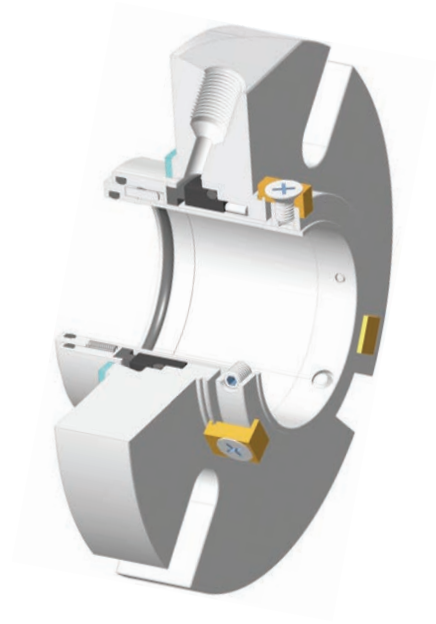
Unit: inch

D	A	E Min.	F	d	B1	B2	G
1.125	4.45	1.34	3.66	0.55	2.24	3.03	1/8"
1.250	4.65	1.34	3.86	0.55	2.44	3.23	1/8"
1.375	4.65	1.34	3.86	0.55	2.44	3.23	1/8"
1.500	4.84	1.34	4.06	0.55	2.64	3.43	1/4"
1.625	5.04	1.34	4.25	0.55	2.83	3.62	1/4"
1.750	5.04	1.34	4.25	0.55	2.83	3.62	1/4"
1.875	5.24	1.34	4.65	0.55	3.03	3.82	1/4"
2.000	6.30	1.42	4.72	0.67	3.31	4.09	1/4"
2.125	6.30	1.42	4.72	0.67	3.31	4.09	1/4"
2.250	6.50	1.42	4.92	0.67	3.50	4.29	1/4"
2.375	6.50	1.42	4.92	0.67	3.50	4.29	1/4"
2.500	6.69	1.42	5.12	0.67	3.70	4.49	1/4"
2.625	6.89	1.42	5.31	0.67	3.90	4.69	1/4"
2.750	6.89	1.42	5.31	0.67	3.90	4.69	1/4"
2.875	7.28	1.65	5.71	0.67	4.21	5.04	3/8"
3.000	7.48	1.65	5.91	0.67	4.41	5.24	3/8"
3.125	7.48	1.65	5.91	0.67	4.41	5.24	3/8"
3.250	7.68	1.65	6.10	0.67	4.61	5.43	3/8"
3.375	7.87	1.65	6.46	0.83	4.80	5.63	3/8"
3.500	7.87	1.65	6.46	0.83	4.80	5.63	3/8"
3.625	8.74	1.81	7.09	0.83	5.00	6.18	3/8"
3.750	8.74	1.81	7.09	0.83	5.00	6.18	3/8"
3.875	8.94	1.81	7.28	0.83	5.20	6.38	3/8"
4.000	9.13	1.89	7.48	0.83	5.39	6.57	3/8"
4.125	9.13	1.89	7.48	0.83	5.39	6.57	3/8"
4.250	9.33	1.89	7.68	0.83	5.59	6.77	3/8"
4.375	9.53	1.89	7.87	0.83	5.79	6.97	3/8"
4.500	9.53	1.89	7.87	0.83	5.79	6.97	3/8"
4.625	9.72	1.89	8.07	0.83	5.98	7.17	3/8"
4.750	9.72	1.89	8.07	0.83	5.98	7.17	3/8"

※ D-Sleeve Dia. A-Gland OD E-Outer space F-Bolt centering
d-Bolt Dia. B1-Gasket ID B2-Gasket OD G-Flushing Port
C-Sealing Depth B0-Sealing Dia.
F-Suggested minimum value, need additional information if value exceeded.
The value of B0 is optional, but need to be specified in order to locate the stationary sealing of gland.

Traditional Mechanical Seals

• AIGI 318A Single Rotary Cartridge Seal



Design Features

- Robust, balanced design for increased seal life and elimination of shaft fretting
- Easy, fast installation for convenient packed pump upgrades
- Multi-coiled springs away from fluid provide even face loading and prevent clogging
- Flush Port: Cooling and abrasive removal; Quench and Drain optional
- High-performance carbon ring provides low-friction and good heat conduction

Application

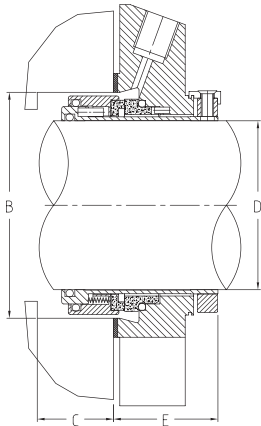
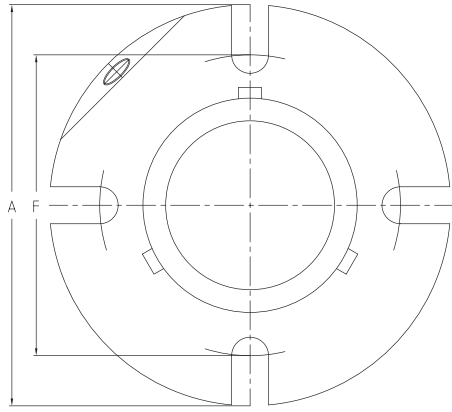
- Water, Slurries, Abrasives, Oil, Mild Corrosives

Operating Limits

Max. Pressure	30kg/cm²
Max. Temperature	150°C (300°F) (FKM O-ring)
Max. Speed	25m/s (5000 Ft/min)

Standard Materials

Metal Part	304SS
Seal Faces	CB, SC, TC
Spring	HastelloyC
O-ring	FKM, EP, NBR
Gland Configuration	Flush Only (Quench/Drain Optional)



AIGI 318A Sizes Data

Unit: mm

D	A	B Min.	B Max.	C Min.	E Min.	F Min.					G
						M8	M10	M12	M16	M20	
20	100	37	45	29	34	62	64	66	-	-	1/8"
25	102	42	46	29	34	64	66	68	-	-	1/8"
28	106	45	52	29	38	69	71	73	-	-	1/8"
30	106	47	52	29	38	69	71	73	-	-	1/8"
32	106	49	56	29	38	73	75	77	-	-	1/8"
35	106	52	58	29	38	75	77	79	-	-	1/8"
38	114	57	61	29	41	78	80	82	-	-	1/8"
40	114	59	63	29	41	80	82	84	-	-	1/8"
42	118	61	66	29	41	84	86	88	-	-	1/8"
45	127	64	66	29	41	84	86	88	-	-	1/8"
48	133	67	72	29	43	90	92	94	-	-	1/8"
50	133	69	72	29	43	90	92	94	-	-	1/8"
55	146	75	78	29	43	96	98	100	104	-	1/4"
60	165	81	86	29	45	104	106	108	112	-	1/4"
65	165	88	102	29	45	-	122	124	128	-	1/4"
70	178	92	106	29	46	-	126	128	132	-	1/4"
75	190	102	114	30	51	-	136	138	142	-	3/8"
80	190	106	115	30	51	-	136	138	142	-	3/8"
85	203	112	120	30	51	-	141	143	147	-	3/8"
90	216	117	132	30	51	-	-	158	162	166	3/8"
95	216	122	132	30	51	-	-	158	162	166	3/8"
100	227	127	140	30	51	-	-	168	172	176	3/8"
105	227	134	145	30	51	-	-	172	176	180	3/8"
110	228	140	150	38	51	-	-	191	195	199	3/8"
115	233	145	158	38	51	-	-	196	200	204	3/8"
120	254	150	168	38	51	-	-	199	203	207	3/8"

※ A-Gland Dia.
 B-ID of Stuffing box
 C-Min. height of Stuffing box
 D-Sleeve Dia.

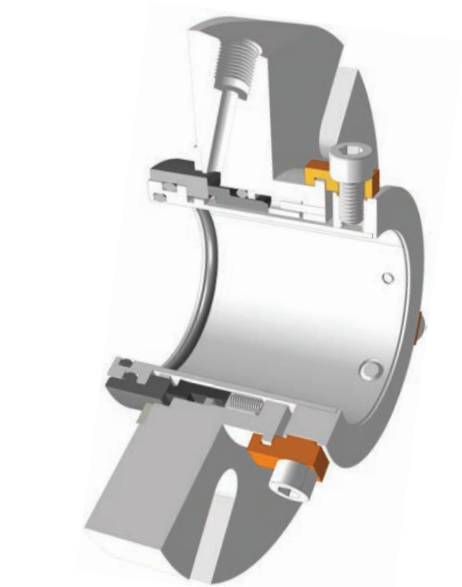
E-Outside sealing length of Stuffing box
 F-Bolt centering
 G-Flushing port

AIGI 318A Sizes Data

Unit: inch

D	A	B Min.	B Max.	C Min.	E Min.	F Min.				G
						3/8"	1/2"	5/8"	3/4"	
1.000	4.02	1.67	1.77	1.14	1.44	2.56	2.68	-	-	1/8"
1.125	4.17	1.81	1.97	1.14	1.56	2.76	2.87	-	-	1/8"
1.250	4.17	1.92	2.13	1.14	1.56	2.91	3.03	-	-	1/8"
1.375	4.17	2.05	2.20	1.14	1.56	2.99	3.11	-	-	1/8"
1.500	4.49	2.24	2.32	1.14	1.65	3.11	3.23	-	-	1/8"
1.625	4.65	2.40	2.56	1.14	1.65	3.35	3.46	-	-	1/8"
1.750	5.00	2.52	2.56	1.14	1.65	3.35	3.46	-	-	1/8"
1.875	5.24	2.62	2.80	1.14	1.71	3.58	3.70	-	-	1/8"
2.000	5.51	2.76	2.80	1.14	1.71	3.58	3.70	-	-	1/8"
2.125	5.75	2.94	3.01	1.14	1.71	3.80	3.92	4.04	-	1/4"
2.250	5.98	3.06	3.19	1.14	1.81	3.98	4.09	4.21	-	1/4"
2.375	6.50	3.19	3.35	1.14	1.79	4.13	4.25	4.37	-	1/4"
2.500	6.69	3.37	3.66	1.14	1.79	4.53	4.65	4.76	-	1/4"
2.625	6.89	3.48	3.86	1.14	1.85	4.72	4.84	4.96	-	1/4"
2.750	7.01	3.63	4.06	1.14	1.85	4.92	5.04	5.16	-	1/4"
2.875	7.17	3.90	4.25	1.18	2.03	5.12	5.24	5.35	-	3/8"
3.000	7.28	4.02	4.45	1.18	2.03	5.31	5.43	5.55	-	3/8"
3.125	7.48	4.17	4.65	1.18	2.03	5.51	5.63	5.75	-	3/8"
3.250	8.19	4.27	4.84	1.18	2.03	5.71	5.83	5.94	-	3/8"
3.375	8.31	4.47	5.04	1.18	2.03	-	6.02	6.14	6.28	3/8"
3.500	8.50	4.59	5.28	1.18	2.03	-	6.26	6.38	6.52	3/8"
3.625	8.50	4.70	5.28	1.18	2.03	-	6.26	6.38	6.52	3/8"
3.750	8.50	4.79	5.28	1.18	2.03	-	6.26	6.38	6.52	3/8"
3.875	8.94	4.98	5.67	1.18	2.03	-	6.65	6.77	6.91	3/8"
4.000	8.94	5.10	5.67	1.18	2.03	-	6.65	6.77	6.91	3/8"
4.125	8.94	5.22	5.67	1.18	2.03	-	6.81	6.93	7.07	3/8"
4.250	9.06	5.33	5.79	1.50	1.88	-	6.93	7.05	7.19	3/8"
4.375	9.06	5.45	5.87	1.50	1.88	-	7.01	7.13	7.26	3/8"
4.500	9.17	5.57	6.61	1.50	1.88	-	7.76	7.87	8.01	3/8"
4.625	10.00	5.75	6.73	1.50	1.88	-	7.87	7.99	8.13	3/8"
4.750	10.24	5.81	6.85	1.50	1.88	-	7.99	8.11	8.25	3/8"

• AIGI 318T Single Stationary Cartridge Seal



Design Features

- Springs isolated from fluid to prevent clogging
- Hydraulically balanced stationary design for low heat generation
- Compact Single Cartridge Seal
- Integral drive parts will not fall out and maintain constant torque
- Dynamic stress relief keeps faces closed

Application

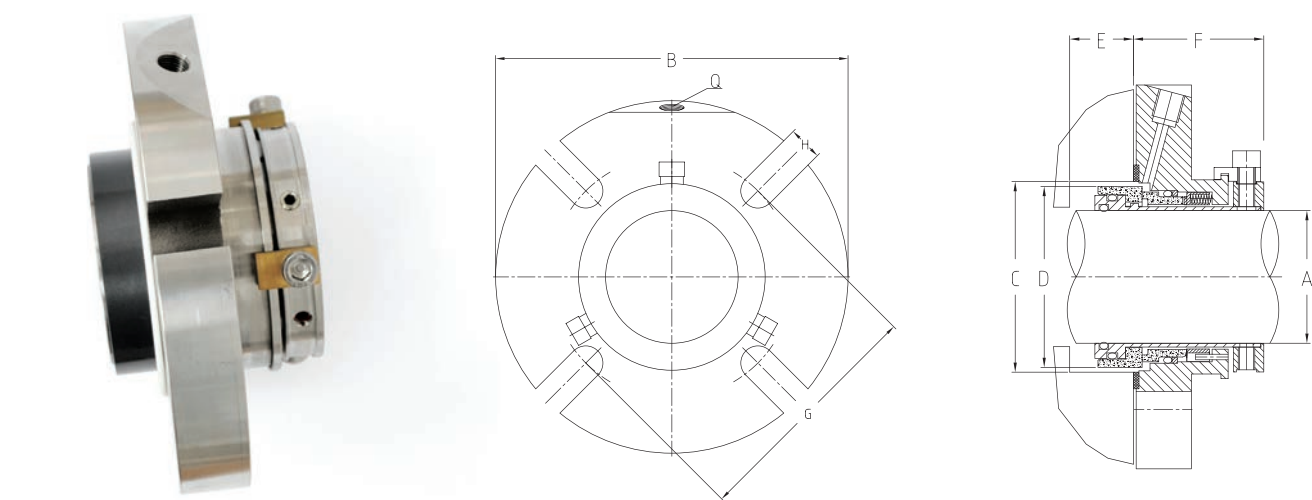
- Water, Abrasives, Slurries, Mild Corrosives

Operating Limits

Max. Pressure	30kg/cm² (450 PSI)
Max. Temperature	150°C (300°F)
Max. Speed	3000RPM (not to exceed 20m/s)

Standard Materials

Metal Part	304SS
Seal Faces	CB, SC, TC
Spring	HastelloyC
O-ring	FKM, EP, NBR
Gland Configuration	Flush Only (Quench/Drain Optional)



AIGI 318T Sizes Data

Unit: mm

A	B	C Min.	C Max.	D	E Min.	F	G Min.					H	Q
							M8	M10	M12	M16	M20		
30	124	50	57	48	16	48	76	78	80	-	-	13.5	G1/8"
35	128	55	62	53	16	48	80	82	84	-	-	13.5	G1/8"
40	134	60	68	58	16	48	86	88	90	-	-	13.5	G1/8"
45	140	65	73	63	16	48	92	94	96	-	-	13.5	G1/8"
48	139	68	74	66	16	48	92	94	96	-	-	13.5	G1/8"
50	145	70	78	68	16	48	97	99	101	-	-	13.5	G1/8"
55	150	75	83	73	16	48	102	104	106	-	-	13.5	G1/8"
60	160	80	91	78	16	48	112	114	116	-	-	13.5	G1/8"
65	194	92	102	90	22	58	-	132	134	138	-	17.5	G1/4"
70	197	95	105	93	22	58	-	135	137	141	-	17.5	G1/4"
75	203	101	113	99	22	58	-	141	143	147	-	17.5	G1/4"
80	207	105	116	103	22	58	-	144	146	150	-	17.5	G1/4"
85	213	111	122	109	22	58	-	151	153	157	-	17.5	G1/4"
90	216	115	125	113	22	58	-	154	156	160	-	17.5	G1/4"
95	222	120	131	118	22	58	-	160	162	166	-	17.5	G1/4"
100	229	127	138	125	22	58	-	167	169	173	-	17.5	G1/4"
110	236	136	148	134	22	58	-	-	177	181	185	21	G1/4"
120	248	147	158	145	22	58	-	-	188	192	196	21	G1/4"

AIGI 318T Sizes Data

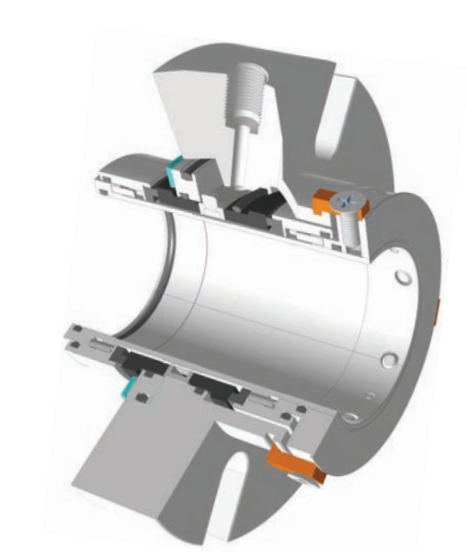
Unit: inch

A	B	C Min.	C Max.	D	E Min.	F	G Min.				H	Q
							3/8"	1/2"	5/8"	3/4"		
1.125	4.88	1.97	2.24	1.89	0.63	1.89	3.05	3.15	-	-	0.53	G1/8"
1.250	5.04	2.17	2.44	2.09	0.63	1.89	3.21	3.31	-	-	0.53	G1/8"
1.375	5.04	2.17	2.44	2.09	0.63	1.89	3.21	3.31	-	-	0.53	G1/8"
1.500	5.28	2.36	2.68	2.28	0.63	1.89	3.41	3.51	-	-	0.53	G1/8"
1.625	5.51	2.56	2.87	2.48	0.63	1.89	3.68	3.78	-	-	0.53	G1/8"
1.750	5.51	2.56	2.87	2.48	0.63	1.89	3.68	3.78	-	-	0.53	G1/8"
1.875	5.47	2.68	2.91	2.60	0.63	1.89	3.68	3.78	-	-	0.53	G1/8"
2.000	5.91	2.95	3.27	2.87	0.63	1.89	4.07	4.17	-	-	0.53	G1/8"
2.125	5.91	2.95	3.27	2.87	0.63	1.89	4.07	4.17	-	-	0.53	G1/8"
2.250	6.30	3.15	3.58	3.07	0.63	1.89	4.47	4.57	-	-	0.53	G1/8"
2.375	7.64	3.62	4.02	3.54	0.87	2.28	5.18	5.28	5.43	-	0.69	G1/8"
2.500	7.64	3.62	4.02	3.54	0.87	2.28	5.18	5.28	5.43	-	0.69	G1/8"
2.625	7.76	3.74	4.13	3.66	0.87	2.28	5.30	5.39	5.55	-	0.69	G1/4"
2.750	7.76	3.74	4.13	3.66	0.87	2.28	5.30	5.39	5.55	-	0.69	G1/4"
2.875	7.99	3.98	4.45	3.90	0.87	2.28	5.53	5.63	5.79	-	0.69	G1/4"
3.000	8.15	4.13	4.57	4.06	0.87	2.28	5.65	5.75	5.91	-	0.69	G1/4"
3.125	8.15	4.13	4.57	4.06	0.87	2.28	5.65	5.75	5.91	-	0.69	G1/4"
3.250	8.39	4.37	4.80	4.29	0.87	2.28	5.93	6.02	6.18	-	0.69	G1/4"
3.375	8.50	4.53	4.92	4.45	0.87	2.28	6.04	6.14	6.30	-	0.69	G1/4"
3.500	8.50	4.53	4.92	4.45	0.87	2.28	6.04	6.14	6.30	-	0.69	G1/4"
3.625	8.74	4.72	5.16	4.65	0.87	2.28	6.28	6.38	6.54	-	0.69	G1/4"
3.750	9.02	5.00	5.43	4.92	0.87	2.28	6.56	6.65	6.81	-	0.69	G1/4"
3.875	9.02	5.00	5.43	4.92	0.87	2.28	6.56	6.65	6.81	-	0.69	G1/4"
4.000	9.29	5.35	5.83	5.28	0.87	2.28	-	6.99	7.15	7.28	0.83	G1/4"
4.125	9.29	5.35	5.83	5.28	0.87	2.28	-	6.99	7.15	7.28	0.83	G1/4"
4.250	9.29	5.35	5.83	5.28	0.87	2.28	-	6.99	7.15	7.28	0.83	G1/4"
4.375	9.76	5.79	6.22	5.71	0.87	2.28	-	7.42	7.58	7.72	0.83	G1/4"
4.500	9.76	5.79	6.22	5.71	0.87	2.28	-	7.42	7.58	7.72	0.83	G1/4"
4.625	9.76	5.79	6.22	5.71	0.87	2.28	-	7.42	7.58	7.72	0.83	G1/4"

※ A-Sleeve Dia.
B-Gland OD
C-ID of Stuffing box
E-Height of Stuffing box

F-Outside sealing length
G-Bolt centering
H-Groove width
Q-Flushing port

• AIGI 2318A Dual Rotary Cartridge Seal



Design Features

- Back to back configuration designed for most demanding application
- Double balanced design improves seal life and performance when pressure fluctuations occur
- Graflex® self-lubricate carbon ring with low friction and high heat conducting capacity
- API610 and API680 standard option

Application

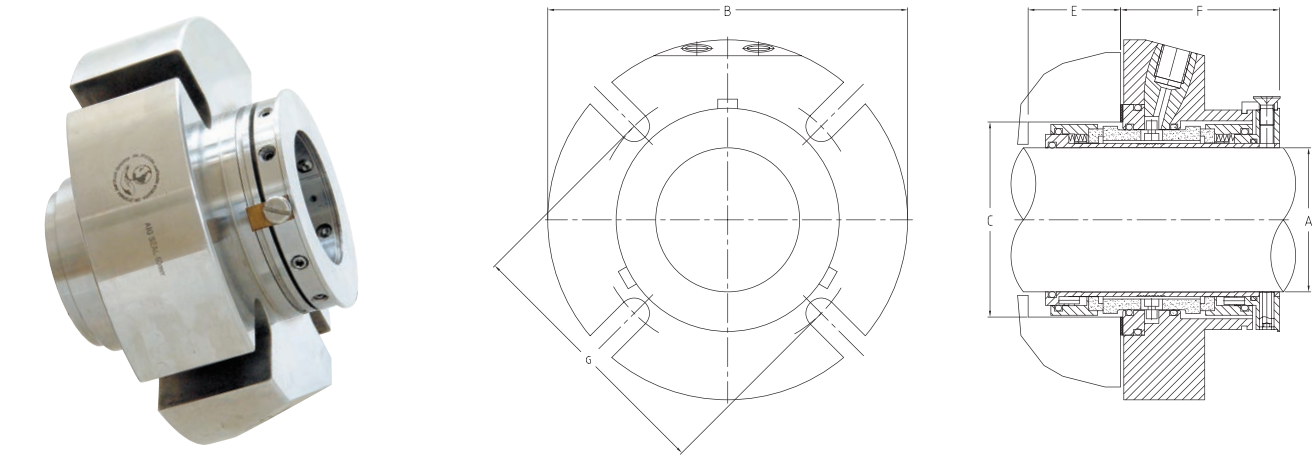
- Hot oil, Corrosive media, Chemicals, Acids and Alkalies

Operating Limits

Max. Pressure	Vacuum to 20kg/cm ² (Vacuum to 300 PSI)
Max. Temperature	150°C (300°F) (FKM O-ring)
Max. Speed	20m/s (4000 Ft/min)

Standard Materials

Metal Part	304SS
Spring	HastelloyC
O-ring	FKM, EP, NBR
Rotary face	Graflex® graphite, SC, TC
Stationary face	SC, TC



AIGI 2318A Sizes Data

Unit: mm

A	B	C Min.	C Max.	E Min.	F	G Min.		
						M12	M16	M20
25	108	45	49	42	75	73	-	-
28	110	49	53	42	75	77	-	-
30	120	51	57	42	75	81	-	-
32	122	53	57	42	75	83	-	-
35	125	57	61	42	75	86	-	-
38	125	60	64	42	75	89	-	-
40	130	62	66	42	75	91	-	-
42	135	64	70	42	75	97	-	-
45	138	67	73	42	75	100	-	-
48	146	70	76	42	75	101	-	-
50	146	73	79	42	75	105	-	-
55	170	78	84	42	75	-	115	-
60	170	83	89	42	75	-	120	-
65	175	88	96	42	75	-	126	-
70	185	98	104	48	89	-	133	-
75	190	103	112	48	89	-	142	-
80	200	108	117	48	89	-	147	-
85	220	113	126	48	89	-	-	162
90	225	118	129	48	89	-	-	167
95	230	123	134	48	89	-	-	172
100	235	129	138	48	89	-	-	177
110	253	139	148	48	89	-	-	187
120	260	148	157	48	89	-	-	197

※ A-Sleeve Dia.
 B-Gland OD
 C-ID of Stuffing box

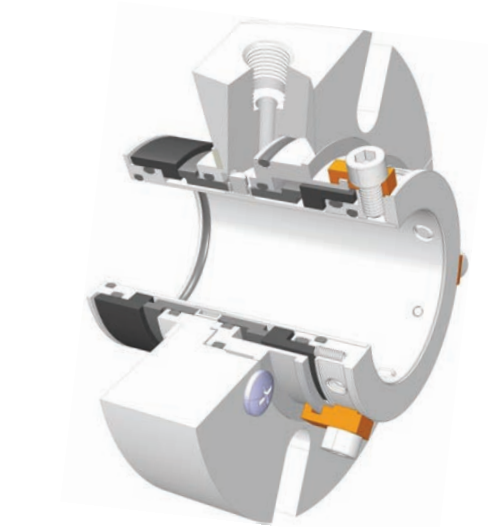
E-Height of Stuffing box
 F-Outside sealing length
 G-Bolt centering

AIGI 2318A Sizes Data

Unit: inch

A	B	C Min.	C Max.	E Min.	F	G Min.		
						1/2"	5/8"	3/4"
1.000	4.33	1.93	2.09	1.65	2.95	3.06	-	-
1.125	4.72	2.01	2.24	1.65	2.95	3.10	-	-
1.250	4.80	2.09	2.24	1.65	2.95	3.14	-	-
1.375	4.92	2.24	2.40	1.65	2.95	3.18	-	-
1.500	5.12	2.44	2.60	1.65	2.95	3.22	-	-
1.625	5.31	2.52	2.76	1.65	2.95	3.26	-	-
1.750	5.43	2.64	2.87	1.65	2.95	3.30	-	-
1.875	5.75	2.76	2.99	1.65	2.95	3.33	-	-
2.000	6.69	3.07	3.31	1.65	2.95	-	4.53	-
2.125	6.69	3.07	3.31	1.65	2.95	-	4.53	-
2.250	6.69	3.27	3.50	1.65	2.95	-	4.72	-
2.375	6.89	3.46	3.78	1.65	2.95	-	4.96	-
2.500	6.89	3.46	3.78	1.65	2.95	-	4.96	-
2.625	7.28	3.86	4.09	1.89	3.50	-	5.24	-
2.750	7.28	3.86	4.09	1.89	3.50	-	5.24	-
2.875	7.48	4.06	4.41	1.89	3.50	-	5.59	-
3.000	7.87	4.25	4.61	1.89	3.50	-	5.79	-
3.125	7.87	4.25	4.61	1.89	3.50	-	5.79	-
3.250	8.66	4.45	4.96	1.89	3.50	-	-	6.38
3.375	8.86	4.65	5.08	1.89	3.50	-	-	6.57
3.500	8.86	4.65	5.08	1.89	3.50	-	-	6.57
3.625	9.06	4.84	5.28	1.89	3.50	-	-	6.77
3.750	9.25	5.08	5.43	1.89	3.50	-	-	6.97
3.875	9.25	5.08	5.43	1.89	3.50	-	-	6.97
4.000	9.96	5.47	5.83	1.89	3.50	-	-	7.36
4.125	9.96	5.47	5.83	1.89	3.50	-	-	7.36
4.250	9.96	5.47	5.83	1.89	3.50	-	-	7.36
4.375	10.24	5.83	6.18	1.89	3.50	-	-	7.76
4.500	10.24	5.83	6.18	1.89	3.50	-	-	7.76
4.625	10.24	5.83	6.18	1.89	3.50	-	-	7.76

• AIGI 2318T Dual Stationary Cartridge Seal



Design Features

- Multi-purpose design Dual Cartridge Seal
- High reliability double balanced seal with low heat generation
- Self-centering design for easy installation
- Integral drive parts will not loosen or fall out and provide Constant torque

Application

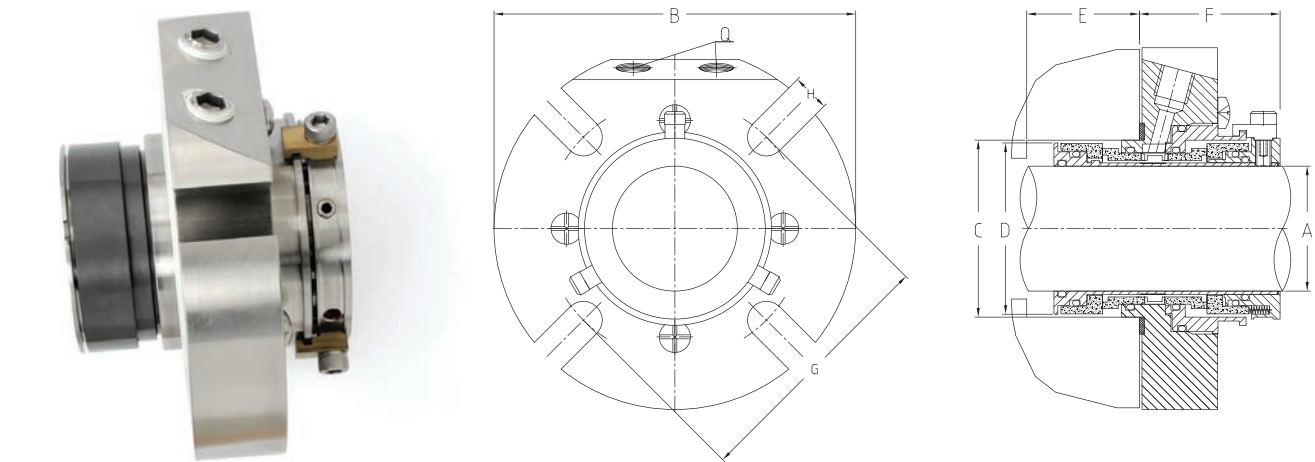
- Hot Oil, Chemicals, Acids and Alkalies

Operating Limits

Max. Pressure	30kg/cm ² (450 PSI)
Max. Temperature	150°C (300°F)
Max. Speed	3000RPM (not to exceed 20m/s)

Standard Materials

Metal Part	304SS
Seal Faces	CB, SC, TC
Spring	HastelloyC
O-ring	FKM, EP, NBR
Gland Configuration	PLAN52, PLAN53



AIGI 2318T Sizes Data

Unit: mm

A	B	C Min.	C Max.	D	E Min.	F	G Min.					H	Q
							M8	M10	M12	M16	M20		
30	105	49	55	48	35	55	76	78	80	-	-	14.5	G1/4"
35	111	54	62	53	35	55	81	83	85	-	-	14.5	G1/4"
40	127	59	67	58	35	55	86	88	90	-	-	14.5	G1/4"
45	140	64	72	63	35	55	91	93	95	-	-	14.5	G1/4"
48	140	68	76	66	35	55	98	100	102	-	-	14.5	G1/4"
50	140	70	78	68	35	55	100	102	104	-	-	14.5	G1/4"
55	153	74	82	73	35	55	-	105	107	111	-	17	G1/4"
60	153	79	87	78	35	55	-	111	113	117	-	17	G1/4"
65	164	92	100	91	42	64	-	-	128	132	-	17	G3/8"
70	196	95	105	94	42	64	-	-	133	137	-	17	G3/8"
75	202	102	112	101	42	64	-	-	139	143	-	17	G3/8"
80	203	105	115	104	42	64	-	-	143	147	-	17	G3/8"
85	211	111	121	110	42	64	-	-	152	156	160	21	G3/8"
90	214	115	125	114	42	64	-	-	157	161	165	21	G3/8"
95	221	120	130	119	42	64	-	-	162	166	170	21	G3/8"
100	228	127	137	126	42	64	-	-	169	173	177	21	G3/8"
110	237	137	147	135	42	64	-	-	178	182	186	21	G3/8"
120	266	146	156	145	42	64	-	-	188	192	196	21	G3/8"

AIGI 2318T Sizes Data

Unit: inch

A	B	C Min.	C Max.	D	E Min.	F	G Min.				H	Q
							3/8"	1/2"	5/8"	3/4"		
1.125	4.13	1.93	2.17	1.89	1.38	2.17	3.18	3.31	-	-	0.57	G1/4"
1.250	4.37	2.13	2.44	2.09	1.38	2.17	3.38	3.50	-	-	0.57	G1/4"
1.375	4.37	2.13	2.44	2.09	1.38	2.17	3.38	3.50	-	-	0.57	G1/4"
1.500	5.00	2.32	2.64	2.28	1.38	2.17	3.57	3.70	-	-	0.57	G1/4"
1.625	5.51	2.52	2.83	2.48	1.38	2.17	3.77	3.90	-	-	0.57	G1/4"
1.750	5.51	2.52	2.83	2.48	1.38	2.17	3.77	3.90	-	-	0.57	G1/4"
1.875	5.51	2.68	2.99	2.60	1.38	2.17	4.05	4.17	-	-	0.57	G1/4"
2.000	6.02	2.91	3.23	2.87	1.38	2.17	4.28	4.41	4.53	-	0.67	G1/4"
2.125	6.02	2.91	3.23	2.87	1.38	2.17	4.28	4.41	4.53	-	0.67	G1/4"
2.250	6.02	3.11	3.43	3.07	1.38	2.17	4.52	4.65	4.76	-	0.67	G1/4"
2.375	6.46	3.62	3.94	3.58	1.65	2.52	-	5.24	5.35	-	0.67	G3/8"
2.500	6.46	3.62	3.94	3.58	1.65	2.52	-	5.24	5.35	-	0.67	G3/8"
2.625	7.72	3.74	4.13	3.70	1.65	2.52	-	5.43	5.55	-	0.67	G3/8"
2.750	7.72	3.74	4.13	3.70	1.65	2.52	-	5.43	5.55	-	0.67	G3/8"
2.875	7.95	4.02	4.41	3.98	1.65	2.52	-	5.67	5.79	-	0.67	G3/8"
3.000	7.99	4.13	4.53	4.09	1.65	2.52	-	5.83	5.94	-	0.67	G3/8"
3.125	7.99	4.13	4.53	4.09	1.65	2.52	-	5.83	5.94	-	0.67	G3/8"
3.250	8.31	4.37	4.76	4.33	1.65	2.52	-	6.10	6.22	6.34	0.83	G3/8"
3.375	8.43	4.53	4.92	4.49	1.65	2.52	-	6.30	6.42	6.54	0.83	G3/8"
3.500	8.43	4.53	4.92	4.49	1.65	2.52	-	6.30	6.42	6.54	0.83	G3/8"
3.625	8.70	4.72	5.12	4.69	1.65	2.52	-	6.50	6.61	6.73	0.83	G3/8"
3.750	8.98	5.00	5.39	4.96	1.65	2.52	-	6.73	6.85	6.97	0.83	G3/8"
3.875	8.98	5.00	5.39	4.96	1.65	2.52	-	6.73	6.85	6.97	0.83	G3/8"
4.000	9.33	5.39	5.79	5.31	1.65	2.52	-	7.13	7.24	7.36	0.83	G3/8"
4.125	9.33	5.39	5.79	5.31	1.65	2.52	-	7.13	7.24	7.36	0.83	G3/8"
4.250	9.33	5.39	5.79	5.31	1.65	2.52	-	7.13	7.24	7.36	0.83	G3/8"
4.375	10.47	5.75	6.14	5.71	1.65	2.52	-	7.52	7.64	7.76	0.83	G3/8"
4.500	10.47	5.75	6.14	5.71	1.65	2.52	-	7.52	7.64	7.76	0.83	G3/8"
4.625	10.47	5.75	6.14	5.71	1.65	2.52	-	7.52	7.64	7.76	0.83	G3/8"

※ A-Sleeve Dia.

B-Gland OD

C-ID of Stuffing box

E-Height of Stuffing box

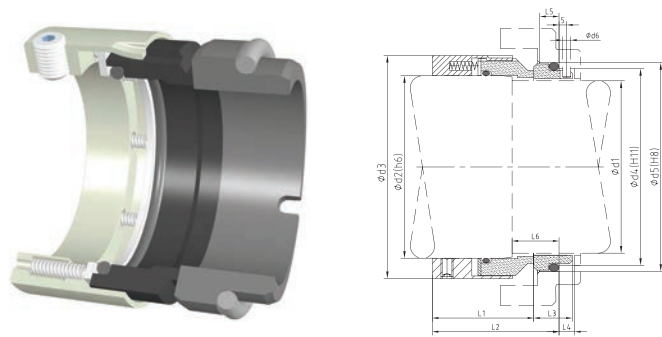
F-Outside sealing length

G-Bolt centering

H-Groove width

Q-Flushing port

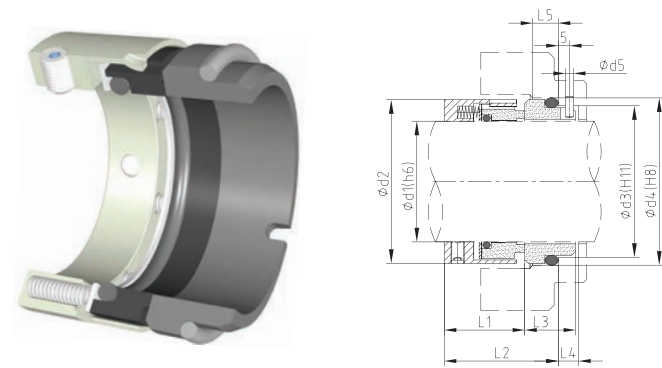
• ***API R8B Balanced Component Mechanical Seal***



Application

- Reliable sealing performance, suitable for general requirements in water, oil and light corrosion media

- ***API R8 Unbalanced Component Mechanical Seal***



Application

- Reliable sealing performance, suitable for general requirements in water, oil and light corrosion media

Operating Limits

Max. Pressure	4.0MPa (R8B), 1.5MPa (R8)
Max. Temperature	150°C (300°F)
Max. Speed	20m/s (4000 Ft/min)

Standard Materials

Metal Part	304SS
Spring	HastelloyC
O-ring	FKM, EP, NBR
Seal Face	CB, SC, TC

※ Other mechanical seals, as Bellow seal are available for special design.

AI GI R8B Sizes Data (with standard JY Stationary/Mating Rings)

Unit: mm

φd1	φd2	φd3	φd4	φd5	φd6	L1	L2	L3	L4	L5	L6
20	24	39	29	35	3	33.5	45	19.5	9	5	20
24	28	43	33	39	3	36	47.5	19.5	9	5	20
25	30	45	34	40	3	36	47.5	19.5	9	5	20
28	33	48	37	43	3	38.5	50	19.5	9	5	20
30	35	50	39	45	3	38.5	50	19.5	9	5	20
32	38	55	42	48	3	38.5	50	19.5	9	5	20
35	40	57	44	50	3	38.5	50	19.5	9	5	20
38	43	60	49	56	4	38.5	52.5	22	9	6	23
40	45	62	51	58	4	38.5	52.5	22	9	6	23
45	50	67	56	63	4	38.5	52.5	22	9	6	23
50	55	72	62	70	4	42.5	57.5	23	9	6	25
55	60	81	67	75	4	42.5	57.5	23	9	6	25
60	65	86	72	80	4	47.5	62.5	23	9	6	25
65	70	91	77	85	4	47.5	62.5	23	9	6	25
70	75	99	83	92	4	52	70	26	9	7	28
75	80	104	88	97	4	52	70	26	9	7	28
80	85	109	95	105	4	51.8	70	26.2	9	7	28
85	90	114	100	110	4	56.8	75	26.2	9	7	28
90	95	119	105	115	4	56.8	75	26.2	9	7	28
95	100	124	110	120	4	57.8	75	25.2	9	7	28
100	105	129	115	125	4	57.8	75	25.2	9	7	28
105	115	148	122.2	134.3	5	53	73	30	13	10	32
110	120	153	128.2	140.3	5	53	73	30	13	10	32
115	125	158	136.2	148.3	5	53	73	30	13	10	32
120	130	163	138.2	150.3	5	53	73	30	13	10	32

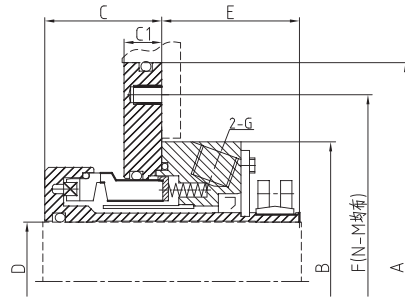
AI GI R8 Sizes Data (with standard JY Stationary/Mating Rings)

Unit: mm

φd1	φd2	φd3	φd4	φd5	L1	L2	L3	L4	L5
20	35	29	35	3	26	37.5	19.5	9	5
24	39	33	39	3	28.5	40	19.5	9	5
25	40	34	40	3	28.5	40	19.5	9	5
28	43	37	43	3	31	42.5	19.5	9	5
30	45	39	45	3	31	42.5	19.5	9	5
32	47	42	48	3	31	42.5	19.5	9	5
35	50	44	50	3	31	42.5	19.5	9	5
38	55	49	56	4	31	45	22	9	6
40	57	51	58	4	31	45	22	9	6
45	62	56	63	4	31	45	22	9	6
50	67	62	70	4	32.5	47.5	23	9	6
55	72	67	75	4	32.5	47.5	23	9	6
60	81	72	80	4	37.5	52.5	23	9	6
65	86	77	85	4	37.5	52.5	23	9	6
70	91	83	92	4	42	60	26	9	7
75	99	88	97	4	42	60	26	9	7
80	104	95	105	4	41.8	60	26.2	9	7
85	109	100	110	4	41.8	60	26.2	9	7
90	114	105	115	4	46.8	65	26.2	9	7
95	119	110	120	4	47.8	65	25.2	9	7
100	124	115	125	4	47.8	65	25.2	9	7
105	138	122.2	134.3	5	47	67	30	13	10
110	143	128.2	140.3	5	47	67	30	13	10
115	148	136.2	148.3	5	47	67	30	13	10
120	153	138.2	150.3	5	47	67	30	13	10

Slurry Cartridge Seals

• AIGI 317A External Cooling Mechanical Seal



Design Features

- Cartridge Single Seal
- Balanced hard face
- All O-Rings are static, eliminating hang-up and fretting wear.
- External springs
- Fast and easy installation

Operating Data

- Temperature: $\leq 100^{\circ}\text{C}$
- Pressure: $\leq 1.0\text{MPa}$
- Operating Speed: $\leq 10\text{m/s}$
- Max.%Solids by Weight: $\leq 30\%$
- Size: $\leq 250\text{mm}$

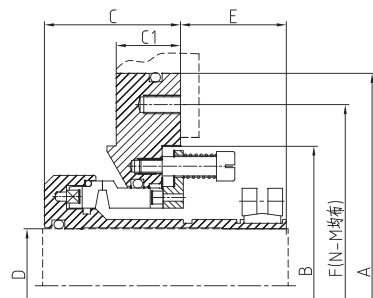
Circulation systems

- PLAN62(External fluid quench, low pressure water, $<0.3\text{Bar}$)

Applications

- Flue Gas Desulfurization (FGD); Ore processing; Coal slurry; waste sludge; etc.

• AIGI 317C Flushing Free Mechanical Seal



Design Features

- Cartridge Single Seal
- Balanced hard face
- All O-Rings are static, eliminating hang-up and fretting wear.
- External springs
- Fast and easy installation

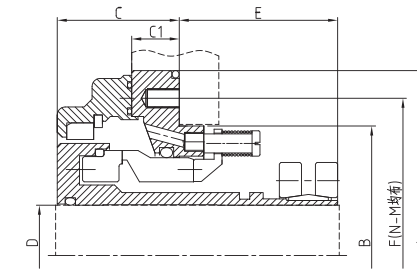
Operating Data

- Temperature: $\leq 80^{\circ}\text{C}$
- Pressure: $\leq 1.0\text{MPa}$
- Operating Speed: $\leq 10\text{m/s}$
- Max.%Solids by Weight: $\leq 30\%$
- Size: $\leq 250\text{mm}$

Applications

- Flue Gas Desulfurization (FGD); Ore processing; Coal slurry; waste sludge; etc.
- ※ Use flushing M/S when contaminant concentration or temperature is too high.

• AIGI 317CF Internal Flushing & Throttling device Mechanical Seal



Design Features

- Clean Internal flushing
- Throttling device
- No-Clog, all springs sit external
- Rotating seal face and stationary seal face in enclosed environment

Operating Data

- Temperature: $\leq 100^{\circ}\text{C}$
- Pressure: $\leq 1.0\text{MPa}$
- Operating Speed: $\leq 12\text{m/s}$
- Max.%Solids by Weight: $\leq 40\%$
- Size: $\leq 250\text{mm}$

Circulation systems

- PLAN32
(Injection of clean fluid into the seal chamber from an external source.
Clean fluid pressure should be higher than chamber by 1-2Bar)

Applications

- Large slurry pumps like Flue Gas Desulfurization (FGD); Ore processing; Coal slurry; waste sludge; etc.

Related AIGI Innovative Fluid Sealing Products

👑 International Patented *Fishbone®* Gaskets



👑 Patented *Castle®* Packing System



• *Preload Disc Springs*

