

More Compact and Simple



3C Cartridge Seal™ Outside type

More compact cartridge seal compared to conventional one. (Save the axial span by up to 5%)

Seal Face Combination: SiC vs SiC Seal Face Shape: Knife Edge Shape

(Carbon vs SiC seal face combination is also available. (Not Knife Edge Shape))

Low sliding resistance by Knife Edge shape face can realize/contribute to Save Power Consumption and Sustainable Society.....

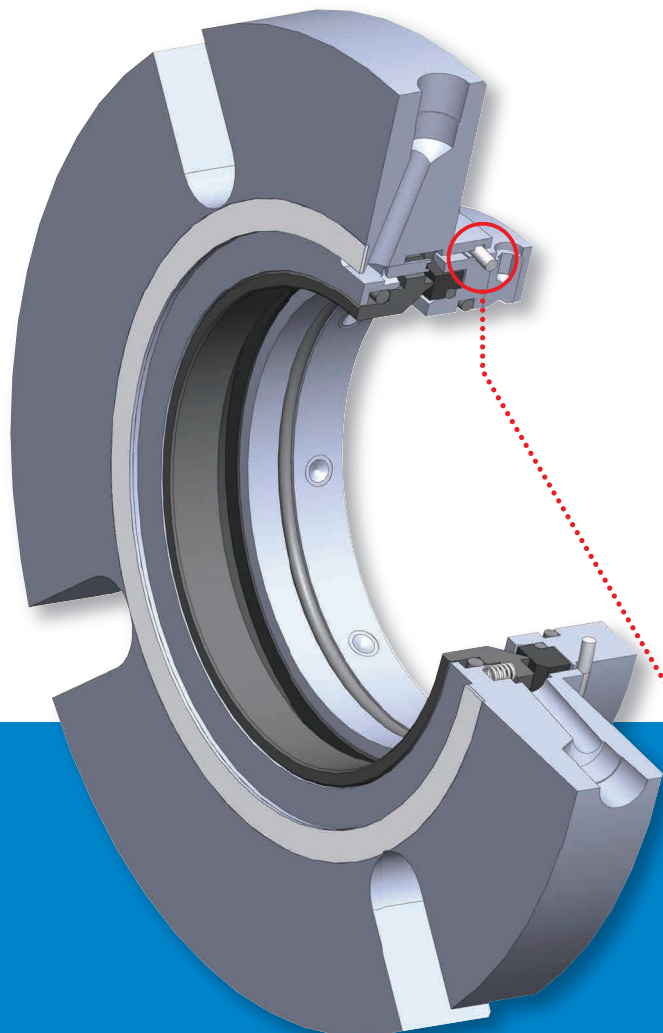
Compared to our standard width and narrow width of SiC vs SiC seal face, power consumption is 58% lower

Reduction of CO₂ emissions -0.3tons/year*¹

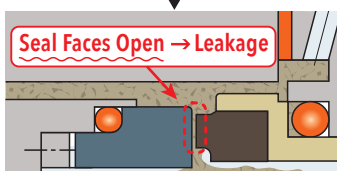
Energy Saving -0.24kWh*²

Advantage of Knife Edge Technology

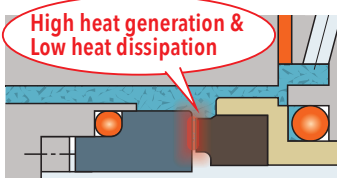
- Especially suitable for high-viscosity/coagulable fluids
- Excellent Wear Resistance and Chemical Resistance by adopting SiC (Silicon Carbide) to the seal face
- Low heat generation by sliding and Excellent Cooling Performance



General Seal Face



Surface Pressure: Low (vs. Knife Edge Face)
▷ Easy to bite the high-viscosity fluid or generated coagulum between the seal faces
▷ Seal Faces Open

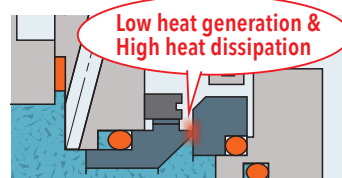


Insufficient cooling leads to the loss of lubricating film and seizure due to the high heat generation by the large sliding area.

Knife Edge Seal Face



Surface Pressure: High (vs. General Seal Face)
*Difficult to bite the high-viscosity fluid
*Cut the coagulum and remove
▷ Difficult to open seal faces and keep good sealing performance



Low heat generation by the small sliding area. High cooling performance due to the large heat dissipation.

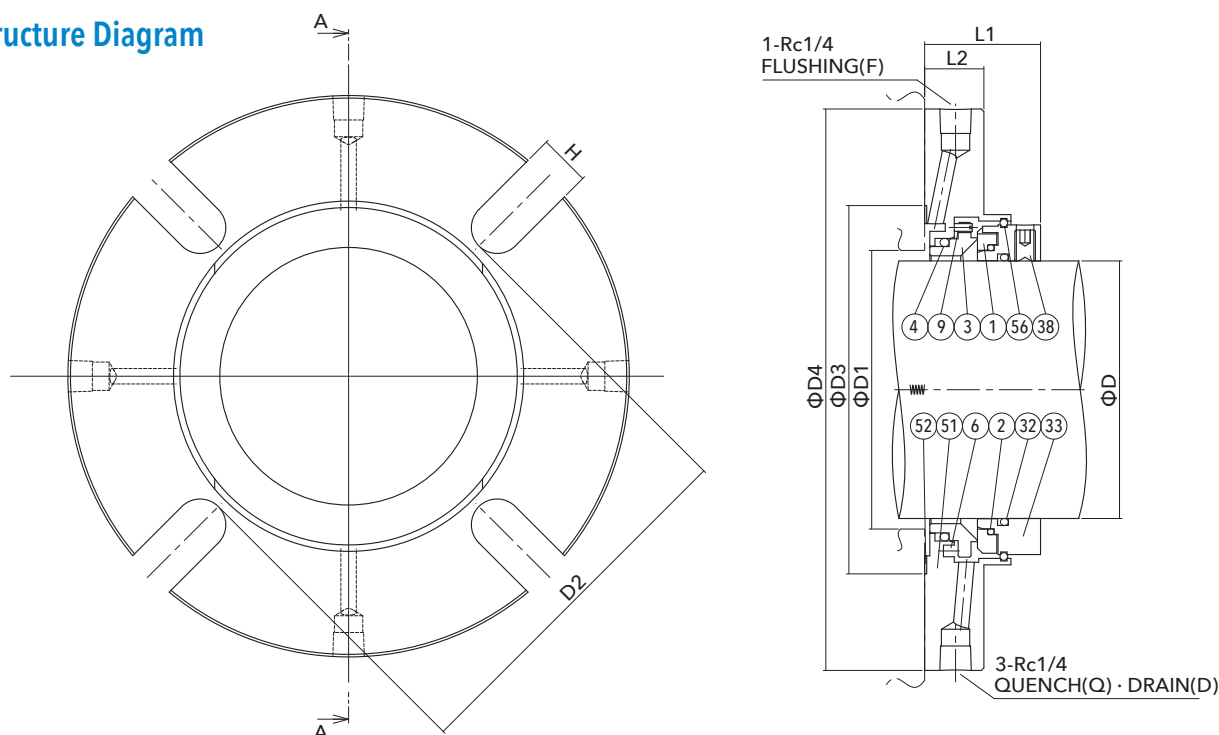
"SET STRING" enable the integration of rotating and stationary parts.

After installation of the cartridge seal on the equipment, complete the setup by removing "SET STRING" before operation.

*1: Size60mm 8hr/day, 365days/year, 0.447kg-CO₂/kWh *2: Size60mm test data

■ **Type** : GAKQ0 (SiC vs SiC, Seal Face Shape:Knife Edge Shape)
GABQ0 (SiC vs Carbon)

■ Standard Structure Diagram



Bill of Materials

NO.	PART	MATERIAL	NO.REQ'D
1	ROTAT. RING	SiC	1
2	O RING	FKM	1
3	SEAL RING	SiC	1
4	O RING	FKM	1
6	SPRING	ALLOY 20	1 SET
9	DRIVE PIN	SUS316 or eq.	1 SET

NO.	PART	MATERIAL	NO.REQ'D
32	O RING	FKM	1
33	STOPPER RING	SUS316 or eq.	1
38	SET SCREW	SCM435 or eq.	1 SET
51	FLANGE	SUS316 or eq.	1
52	GASKET	GLASS F. PTFE	1
56	SET STRING	PTFE	1

Dimensions

ΦD	ΦD1		D2	ΦD3	ΦD4	H	L1	L2
	Min	Max						
20	35	46	53	53	104	12	33	19
25	40	51	58	58	104	12	33	19
28	45	54	61	61	108	12	33	19
30	45	56	63	63	108	12	33	19
32	48	58	65	65	115	14	33	19
35	50	61	68	68	118	14	33	19
38	50	64	71	71	118	14	33	19
40	55	66	73	73	118	14	33	19
42	60	68	75	75	125	14	33	19
45	60	71	78	78	128	14	33	19
48	60	75	82	82	135	16	38	22
50	60	79	88	86	138	18	38	22
55	65	81	90	88	138	18	38	22
60	70	96	105	103	164	18	38	22
65	75	96	105	103	164	18	38	22
70	80	102	111	109	178	18	45	23
75	85	114	123	121	193	22	45	23
80	90	117	128	124	193	22	45	23
85	95	124	133	131	208	22	45	23
90	100	124	133	131	208	22	45	23
95	105	134	143	141	218	22	45	23
100	110	134	143	141	218	22	45	23

■ Applicable Conditions

Speed	~20m/s
Pressure	[Standard] 0~0.8MPaG (SiC vs SiC, Knife Edge) 0~1.6MPaG (SiC vs SiC) 0~2.0MPaG (carbon vs SiC)
Temperature	-20~150°C
Fluid	Water · Oil (Slurry concentration max. 5wt%)

Note

- 1) To be recommended to flush at a flow rate of 2~3L/min to maintain the lubrication between the seal faces.
- 2) Knife Edge Type can be used in no flushing if the fluid temperature is 40°C or more below the boiling point (e.g. Water @atmospheric pressure: max. applicable fluid temperature is approx. 60°C).
(Please contact us for consideration about no flushing.)
- 3) O-ring and Gasket: Applicable Temperature Range by Materials

Material	Temperature inside the stuffing box(°C)
NBR	-20~60
EPDM	-20~100
FKM	0~150
FFKM	0~150

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**Safety
precaution**

When using this product,
please use correctly and pay sufficient

- Please understand that this catalog may change without prior notice.
- The values shown on this catalog are reference values, not guaranteed values.



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