



APOG-FBSX

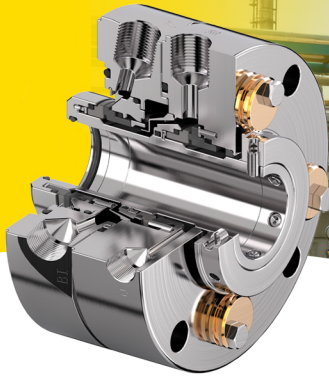
DUAL CARTRIDGE SEAL

CATEGORY 1

TYPE A

2CW-CW

3CW-FB



► TECHNICAL FEATURES

- The sealing configuration is 3CW-FB, Can also be used as 2CW-CW.
- The front end is designed with a corrugated pipe, which can withstand higher temperatures of the medium.
- The stationary ring adopts structural position limiting.
- The inner sealing adopts a double balanced design, which can effectively reduce the impact of pressure fluctuations and is suitable for both arrangement 2 and arrangement 3.
- The outer sealing, combined with the Plan 52, provides additional suppression sealing effect, while the Plan 53A/53B/54 maximizes the suppression of high-risk fluid leakage into the atmosphere.
- Well perform under Arrangement 2 or Arrangement 3 operation, containment control or eliminate of process emissions.
- Adopting a fixed graphite throttle bushing.
- Equipped with Quench and Drain environmental ports.

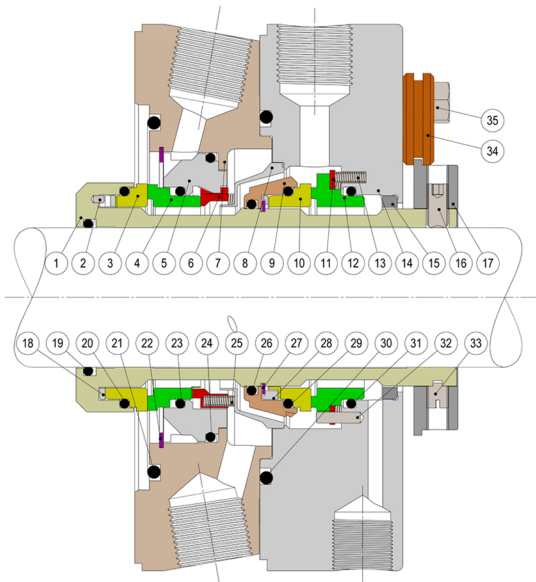
► RECOMMENDED PIPING PLANS

Process side	01, 02, 03, 11, 12, 13, 14, 21, 22, 23, 31, 32, 41
Between seals	52, 53A, 53B, 53C, 54
Atmospheric side	61, 62, 65A, 65B

► PERFORMANCE CAPABILITIES

Shaft diameter	20 ~110 mm (0.79" ~4.33")
Pressure	≤ 25 bar
Temperature	-40 °C ~+ 400 °C
Sliding velocity	≤ 30 m/s

► PRODUCT STRUCTURE DIAGRAM



► PRODUCT DESCRIPTION

- API 682 Category 1, Type A, Arrangement 2/3
- Dual seal configuration
- Balanced design
- Independent of direction of rotation
- Cartridge construction
- Robust construction with shrink-fitted seal face
- Heavy duty solid seat design

► TYPICAL INDUSTRIAL APPLICATIONS

- Chemical industry
- Petrochemical industry
- Oil and gas industry
- Highly volatile hydrocarbons
- Toxic and hazardous media
- Media with poor lubrication properties
- Low solids content and low abrasive media
- Vertical and horizontal ANSI chemical standard pumps

► THE COMPARISON CHART OF STANDARD MATERIAL

NO.	Name	Material
1	Screw	316SS/Hast.C/D2205/D2507/904L
2,32	Pin	316SS
3,10	Rotary Face	Carbon/SIC/TC
4,12	Stationary Face	Carbon/SIC/TC
5	Deflector	316SS/Hast.C/D2205/D2507/904L
6	Spring Plate	316SS
7	Gland Insert	316SS/Hast.C/D2205/D2507/904L
8	Deflector	316SS
9	Rotary Holder	316SS
11	Thrust Ring	316SS
13,25	Spring	Hast.C
14	Gland	316SS
15	Bush Ring	Carbon
16	Drive Screw	A2-70
17	Clamp Ring	316SS
18	Drive Ring	A2-70
19,20,21	O-Ring	FKM/EPDM/Aflas/Kalrez
22,27	Circlip	316SS
23,24,26	O-Ring	FKM/EPDM/Aflas/Kalrez
28	Drive Ring	316SS
29,30,31	O-Ring	FKM/EPDM/Aflas/Kalrez
33	Setting Screw	A2-70
34	Setting Clips	304SS
35	Clip Screws	A2-70