Strategic Versatility
SMS1, RB1, SB1, SS1

One design,
Four Integrated Seals
Traditional cup point set screws in rotating units are replaced by a patent pending Plunger-Lock drive. The torque transmission strength is increased 5 fold over traditional cup point set screws. Most importantly, it allows for quick/easy assembly and seal-kit replacement.

The entire drive mechanism is out of product. This system eliminates any possibility of sleeve distortion from over-tightened set screws. There are no set screws to “back out”. The spring-loaded mechanism keeps the lug “trapped” in position.

No more difficult set screws. Our unique, Plunger-Lock Drive makes assembly easy.

(Patent No. 7979986)

With common sleeves, glands, and seal parts for all designs, cartridge assembly is quick and fail-safe. Plus, it’s easy to modify face material, metallurgy and elastomers. This strategic grouping covers 80% of industries’ sealing applications.

The efficiency gained allows aggressive price structures and even low-cost repair kits and exotic alloys at substantial savings. Flex-A-Seal’s famous premium welded bellows designs are included at multiple spring prices.

Downstream, the benefits start with quick deliveries, allowing customers to minimize inventories through various exchange programs.

Design advantages are: simple, easy-to-install cartridge designs; sleeves that are isolated from the product; fewer “O” rings and rugged machined construction.

Versatility Means Savings and Reliability

There are Clear Reasons to Employ the Integrated Cartridge System

Interchangeable sleeves, glands, clips, faces, rotaries, seats, “O” rings, and fasteners.
**SMS1 Stationary Multiple Spring Cartridge**

- Only 4 primary assembled parts
- Faces, metallurgies, and elastomers are easily upgradeable
- Self-cleaning
- Easy cartridge installation
- Hydraulically balanced design
- No springs to break or clog
- Flush position maximizes cooling
- Fits all standard and big bore ANSI pumps
- Uniform 360° transfer of torque to primary rotating face
- Sleeve is isolated from product
- RB3 FV&D all benefits of RB1 plus with vent and drain connections made to different sizes to assure that correct piping plans are employed

**SB1 Stationary Welded Bellows Cartridge**

- Faces designed for optimum heat dissipation
- Shrouded rotary seal ring for maximum face protection and reliable startup
- Easy cartridge installation
- No dynamic elastomers
- Hydraulically balanced design
- Even face loading
- Flush position maximizes face cooling
- Fits all standard and big bore ANSI pumps
- Uniform 360° transfer of torque to the primary rotating face
- Only 2 static “O”-rings
- Sleeve is isolated from product
- SB3 FV&D all benefits of SB1 plus with vent and drain connections made to different sizes to assure that correct piping plans are employed
- Very cost effective upgrade

**SMS3 FV&D**

- All benefits of SMS1 plus with vent and drain connections made to different sizes to assure that correct piping plans are employed
- Very cost effective upgrade

**RB1 Rotating Welded Bellows Cartridge**

- Only two static “O”-rings
- Sleeve is isolated from product
- RB3 FV&D all benefits of RB1 plus with vent and drain connections made to different sizes to assure that correct piping plans are employed
- Very cost effective upgrade

**SB3 FV&D**

- All benefits of SB1 plus with vent and drain connections made to different sizes to assure that correct piping plans are employed
- Very cost effective upgrade

**Material Options**

- Carbon
- Nickel Tungsten Carbide
- Silicon Carbide
- Hastelloy® C 276
- 316 SS
- Viton® + Ethylene Propylene
- Aflas®
- Perfluoroelastomer
- TVJ® +

**Max. Temp.**

- 400ºF (200ºC)
- Consult factory for higher temperatures

**Max. Pressure**

- 300 PSI (20 BAR)
- Consult factory for higher pressures

**Max. Speed**

- 4500 fpm
- 6000 fpm
- stationary pusher design
- heavy-duty non-clogging design
- faces designed for optimum heat dissipation
- one heavy duty single spring located out of the product
- shrouded rotary seal ring for maximum face protection and reliable start-up
- uniform 360˚ transfer of torque to primary rotating face
- upgradeable faces, metallurgies, and elastomers
- sleeve is isolated from product
- hydraulically balanced
- easy cartridge installation
- flush position maximizes face cooling
- fits all standard and large bore ANSI pumps

SS3 FV&D

- all benefits of SS1 plus with vent and drain connections made to different sizes to assure that correct piping plans are employed
- very cost effective upgrade

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**Indicate metric when ordering

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<th>Max. Temp.</th>
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**Note:** "O" rings will lower temperature limitations

**Viton®** is a DuPont Performance Elastomer

**Asahi Glass Company Ltd. Registered Trademark

**Cabot Stellite Div. Registered Trademark
Flex-A-Seal offers a line of welded metal bellows seals to handle extreme high-heat operating conditions. Full technical specification and application information is available upon request.

**Styles 60/62/64/66**  
**High Temperature Solutions**

Capabilities include:

- Temperatures to 800°F/425°C
- Compatible metallurgy for high temperatures
- High temperature static grafoil packing throughout
- Balanced design - pressures to 300 PSI
- Self-cleaning
- Stationary and drive lug options
- Cartridge designs available
- Single and double-ply AM350, Inconel 718 bellows available
- Easy installation
- Individual connection sizes to assure proper piping
- Easily upgradeable to API design specifications

Manufacturing and stocking centers

**USA**

**Flex-A-Seal Headquarters**  
291 Hurricane Lane  
Williston, VT 05495

Phone: 1-800-426-3594 (USA only)  
1-802-878-8307  
Fax: 1-802-878-2479

Email: sales@flexaseal.com

**Flex-A-Seal Gulf Coast**  
1719 South Sonny Avenue  
Gonzales, LA 70737

Phone: 1-225-484-0007  
Fax: 1-225-341-8922

**BRAZIL**

Rua Javaés, 441/443  
Bom Retiro, Sao Paulo  
Brazil CEP 01130-010  
Phone: 55-11-3736-7373 • 55-11-3736-7371  
Fax: 55-11-3736-7355

Email: vendas@flexaseal.com.br

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